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Wolfgang Werner

This paper is dedicated to Brigitte Lau, who lost her life in a tragic motor accident in early November 1996. As former Chief Archivist of the National Archives of Namibia, Brigitte assisted in locating sources for this research, but did not live to read the result.

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NOTE: OPINIONS EXPRESSED IN THIS REPORT ARE THOSE OF THE AUTHORS' AND DO NOT REPRESENT THE OPINION OF THE DEPARTMENT FOR INTERNATIONAL DEVELOPMENT (FORMERLY ODA), OF THE UK GOVERNMENT.

C. KERVEN, WINDHOEK NOV 1997

TABLE OF CONTENTS

1 INTRODUCTION

JONATHAN COX AND ROY BEHNKE

1.1 The enclosure issue

The struggle for Namibian independence was reputedly fought over land, and since independence no issue has been as consistently high on the political agenda as land reform. This pressure has come about largely from the perceived mal-distribution of land between (predominantly White) freehold farming areas, and 'communal' areas which consist of state land previously set aside as black reserves under colonial law. At independence in 1990, almost half the total land area of Namibia was owned by around 4,000 white farmers, while communal land supported 90% of Namibia's rural population. Black commercial farms represented less than 3% of the commercial area, with an average size of 335 ha, compared with 7,200 ha for White-owned farms. Perhaps not surprisingly, initial efforts to address the land question in Namibia, including the Agricultural (Commercial) Land Reform Act of 1995, were preoccupied with redistributing commercial land, and until recently other elements of land reform, including reform within communal areas, have been largely overlooked.

While the statistics presented here provided the political initial impetus for Namibian land reform, they are misleading on two counts. Firstly, they give an exaggerated impression of the distribution of the ownership of the country's agricultural potential. The best agricultural land in Namibia – and most of the land suited to crop agriculture – is situated in the northern communal areas, where black Namibians have always been entitled to farm. Most 'commercial' land, on the other hand, is unsuited to cropping, and low rainfall means that relatively few animals or people per hectare can be supported. Control over Namibia's agricultural potential is certainly unequally distributed, but not to the extent suggested by simple comparisons of total commercial and communal land areas.

Secondly, the conventional comparison between 'commercial' and 'communal' land use in Namibia supports a long standing dualistic view which in reality has never been particularly accurate or useful. Dualism in this case stems from the idea that distinctive types of agricultural system result from different tenure systems (freehold and communal), which themselves are mutually exclusive. But there exists in Namibia a large grey area in which tenure arrangements are not consistent with any standard typology, and where the boundaries between commercial and communal agriculture have become blurred. Much of 'blurring' predates independence and includes the incorporation of commercial farms into communal areas by the colonial government, as well as the creation of ranches by parastatals and local authorities in Okavango, Oshikoto and elsewhere. While the scale of these ventures was modest, the precedent they set was important, as in the following decades the erection of private fences in the communal areas reportedly led to the *de facto* privatisation of much of the communal resource base, particularly in parts of Okakarara, Okavango and former Ovamboland. Anecdotal evidence suggests this enclosure process has been accelerating since independence, to the extent that it now represents a significant administrative and legal problem.

Prior to independence it would appear that fencing was carried out mainly with the consent of local traditional authorities – and indeed that it was a deliberate effort on the part of traditional leaders to secure land against alienation by the colonial regime. Thus, in areas such as Oshikoto, the focus of this report, a recognised framework for allocation of land was developed in which enclosure was in some degree regulated (in this case by the Ndonga Tribal Authority). While evidence suggests that this allocation framework has survived beyond independence, some commentators assert that as fencing activity escalated over this period, preexisting customary systems of resource control began to break down. In this situation a land-grab ensues, in which land is privatised contrary to statutory law and without the consent of local traditional authorities with customary control over land matters. However, few objective reports have so far been able to help confirm or refute this view of events.

Whatever the precise mechanisms of the process, there is no doubt that large scale enclosure of communal land has been taking place over the past twenty years or so. The important questions that remain to be answered are to what extent communal resources have been expropriated, and what have been the effects of these changes on the various users who are now competing for the use of natural resources in these areas. Most pressing is the question of how populations 'outside' the new enclosures are being affected by recent shifts in resource control. It would appear that much of the land being fenced has been allocated by traditional leaders for use by black elites – decisions which the majority of rural natural resource users are unable to challenge. Costs of enclosure are prohibitive for most farmers, who are forced to make use of ever-shrinking grazing areas. Under these conditions, concentration of animal ownership has reportedly increased, with marked social differentiation between communal farmers and those who have secured individual (and dual) grazing rights. Fences also have negative impacts on herd mobility and many farmers have complained that their seasonal transhumance routes have been disrupted, and that access to existing key resources is becoming more limited. The environmental implications of confining seasonal grazing to ever-shrinking areas of commonage are likely to be significant.

The justification for enclosure is argued along the lines that fencing is a necessary step towards making the livestock sector in communal areas more productive. Moreover, in this newly independent country, many feel it is their right to settle where they wish and to adopt farming practices denied to them under former colonial regimes. Most commentators have been sceptical of this argument, however, and 'newly-commercialising' farmers have been accused of simply using the ranches as grazing reserves in conjunction with conventional communal grazing practices. Once again, however, there are few data to support this premise.

Although initially quick to announce its intentions for major land reform after independence, as well as to denounce illegal fencing, the government has been slow to develop a strategy to resolve the enclosure issue. This apparent prevarication has been greeted with increasing frustration by the public, the press and the academic community – and was the main impetus behind the 'alternative' People's Land Conference in 1994 (NGO–WCLR 1994). The reasons why government policy in this area has been difficult to formulate are at once technical, political and legal, and the government's cause is not helped by the current dearth of reliable information regarding local land tenure, that is in part a legacy of Namibia's colonial past. At present, most descriptions of communal land tenure have been passed on

from author to author, leading to a general view of communal tenure as monolithic and static. Evidence in this report and elsewhere suggests that this is not the case. Tenure arrangements vary considerably – both in space and over time, and our present limited understanding of these arrangements is inadequate. There is therefore a basic need for objective, reliable and up to date information on current trends in resource ownership, access, and allocation procedures. This report attempts to some degree to help fill this gap.

The research reported here uses a multi-disciplinary approach to explore the issue of enclosure in northern Namibia. In the next chapter, we present a short review of recent research carried out on this topic and introduce some of the key issues at the centre of the enclosure debate. This review helps to piece together a 'standard' conventional view of tenure in northern Namibia, and presents the actors involved in the process of tenure change. In reality the static picture this exercise provides is far from perfect, and in many areas is not consistent with our own findings. These come from a mixture of historical, sociological and geographical research and are presented in sections 3–4 of this report, focussing on a specific area of eastern Oshikoto. In Section 3 Wolfgang Werner assesses the historical background and elucidates some of the factors that have helped shape patterns of land tenure, particularly up to independence. In the following section, Jon Cox evaluates the current scale of the fencing problem in the field area, and examines the current distribution of enclosures. A more detailed examination of the current land management strategies and their implications is provided by Carol Kerven in Section 5. The final section seeks to synthesize the main findings from these approaches and assess their implications in terms of options available to government.

1.2 The study area

The location of the study area is shown in Figure 1.1. The area forms part of Oshikoto, a new region created after independence following the activities of the Delineation Commission, which divided Ovamboland into four new Regions (Omusati, Oshana and Ohangwena, as well as Oshikoto). In fact only about half of present day Oshikoto used to be in Ovamboland – the southern half of the district consists of land formerly part of Tsumeb District, which contains predominantly White commercial ranches. Today these two areas are still separated by a veterinary cordon fence (the 'red line'), erected in the 1970s and which has had profound effects on the marketing potential of local cattle. However, as in Namibia as a whole, the distinction between 'communal' and 'commercial' areas does not bear up to closer scrutiny in Oshikoto. To start with there is the Mangetti Block, which consists of demarcated and fenced ranches created by the parastatal Bantustan Investment Corporation in the 1970s. In addition 'unofficial' fences began to spring up at around the same time, and land for fencing continues to be allocated by the Ndonga Tribal Authority today.

Eastern Oshikoto is a frontier area and has long been a grazing area for livestock from heavily stocked villages in or bordering on the Oshana (floodplain) systems to the east. Driven by population pressure, people have also been migrating out of the Oshanas, first grazing their animals (and coming to know an area), then settling, and finally forming officially recognised villages. This process has been continuing since the early 1970s, with some of the more easterly settlements only becoming official villages earlier this decade (residents have to apply to the Tribal Leadership to effect this change in status). Today, new

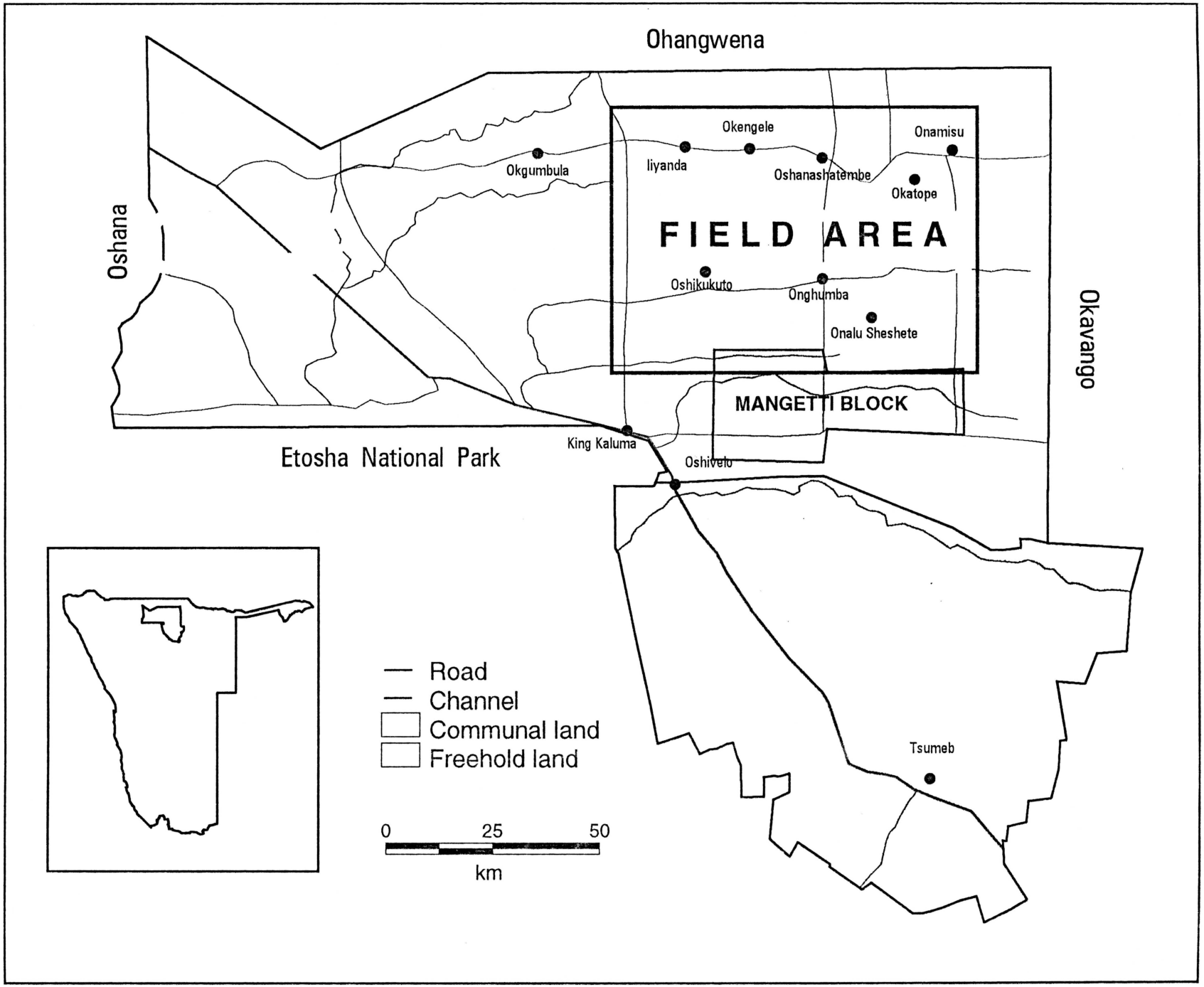

Figure 1.1 Location of study area

settlements on virgin land are being established all the time. The area is, however, extremely remote. There are no gravel roads in the field area, and services like shops, clinics and schools have penetrated only as far east as Okgumbula.

While subsistence agriculture has been pushing steadily from the west, large scale private

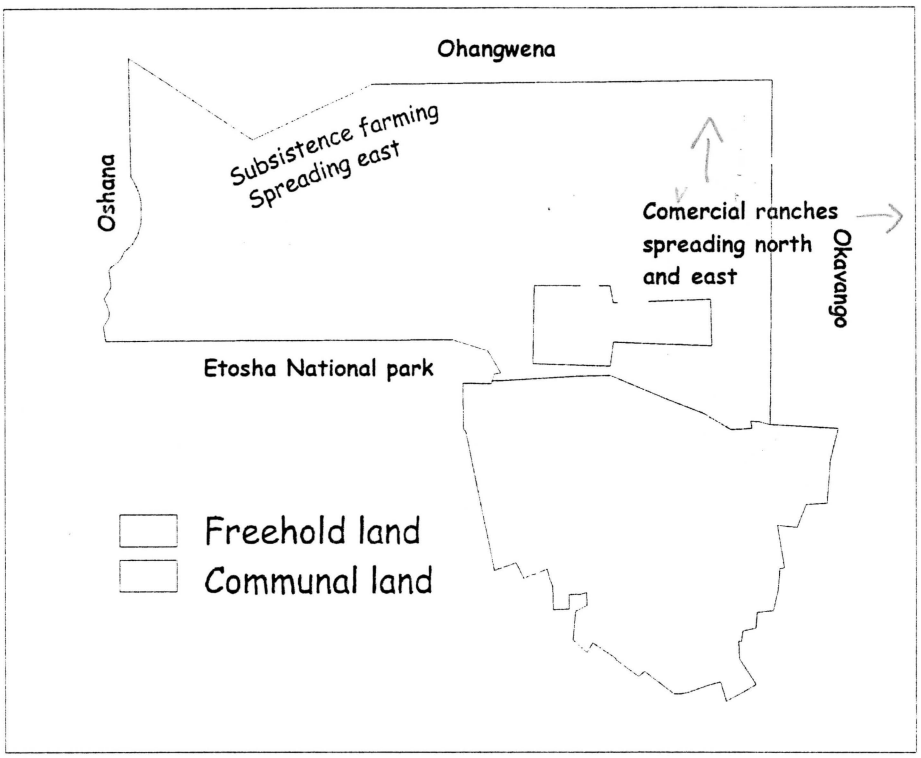

Figure 1.2 Expansion of subsistence farming and commercial ranching in eastern Oshikoto

fencing has been advancing from the opposite direction. Private enclosure of communal rangeland reportedly began in the south and east of Oshikoto, adjacent to the commercial farming areas around Tsumeb and the Mangetti farms, and has been expanding to the north and west. Fencing most likely spread from the Mangetti Block as larger communal herd owners started to imitate the management practices of their commercial neighbours, or attempted to foreclose further commercial farm development by doing a bit of enclosing of their own. A survey of fences carried out in 1994 (Holme and Kooiman 1994) shows that in the densely populated areas of west Oshikoto, range enclosure is relatively uncommon – with fencing activity being limited to bush fences around arable fields and homesteads. Conversely, the land adjacent to the Mangetti Block was almost completely enclosed, with 80–100 % of the area having been fenced off. Very large enclosures were also detected in the remote north and north eastern areas of Oshikoto which were previously used only for emergency grazing. Our own surveys, carried out in late 1996, confirm this general pattern, but also indicate that new fences have been constructed in the last two years (although there are many inconsistencies between the two fencing estimates).

From this brief description it is apparent that two antithetical forms of land use – peasant agriculture and large scale commercial ranching – are expanding into eastern Oshikoto from

opposite directions (Figure 1.2). Secondary reports suggest that in this contest, poor farmers are likely to gain little. They are not consulted on the issue of land allocations to semi-commercial farmers (because access to grazing land rather than village resources is in question, decisions are made by senior traditional leaders who reside outside the area concerned). Nor are they ever likely to be in a position to offer the large sums of money reputedly being offered traditional authorities for land allocation. But while many criticise private fencing on the basis of equity, others feel strongly that enclosure is a prerequisite for improving livestock productivity in the area. As such, the situation in the field area accurately reflects some of the wider concerns, relevant throughout Namibia, that have been outlined in this brief introduction. In this respect the implications of findings presented in the following sections are pertinent to the wider context of land reform throughout Namibia.

2 THE RESEARCH CONTEXT

JONATHAN COX

This section provides a brief review of issues relating to land tenure and enclosure in northern Namibia, as presented by previous research. The review is instructive, not only in that it provides a general context for the sections that follow in this report, but also because it represents a 'typical' view of the way the enclosure problem is presented in Namibia. This view is conventionally rather simplistic; portraying enclosure as an essentially anti-social process carried out by black elites in cahoots with traditional authorities. Although fences are erected on the premise of 'commercialisation' through 'modernisation', few commentators have taken this line of argument seriously – rather commercialisation is considered a pretext for large scale cattle owners to secure their own pasture for use in conjunction with existing communal resources. On these and other issues, much of the primary material we present in later sections of this report differs from the accepted view of the enclosure process in both detail and implication.

This section begins with a brief review of tenure arrangements in the mixed cropping and livestock areas of northern Namibia – focussing specifically on recent shifts in arable, and more significantly rangeland tenure. The role of traditional leaders and the position of statutory law as regards land allocation is then dealt with in some detail, as is the recent record of the Namibian government regarding communal land reform.

2.1 Communal land tenure

The map in Figure 2.1 shows the distribution of communal and commercial land in Namibia. Combined, the communal areas have a total land area of 33.6 m ha, or 40.8 % of the country. In 1991 their combined human population was around 850 000, while the populations of cattle, sheep and goats were 950 000, 240 000 and 1 030 000 respectively. The human population distribution is heavily weighted towards the northern communal areas, with more than 70 % living in the area stretching from Kaokoland to Caprivi. Overall, the crop producing areas (Ovambo, Okavango, and Caprivi) account for 59 % of the population, of which the majority (44 % overall) live in Ovamboland. Population pressure in the remaining communal areas is negligible.

Farming systems in Namibia's communal areas fall into three broad categories, based mainly on rainfall. Semi-desert areas (annual rainfall 100–300 mm), including Namaland and Damaraland, support predominantly (goat-dominated) small stock. These areas are sparsely populated (63 000 in 1991), with most people having been forcibly expelled from much of their former pastures. Cattle pastoralism dominates in the slightly wetter (300–500 mm) areas of former Hereroland, where again most of the human population (27 000) was expelled from grazing areas now occupied by commercial cattle ranchers. In contrast, land in the sub-humid (>500 mm) communal areas north of the veterinary cordon fence was not expropriated during the colonial period. These areas support mixed dryland cropping/livestock husbandry,

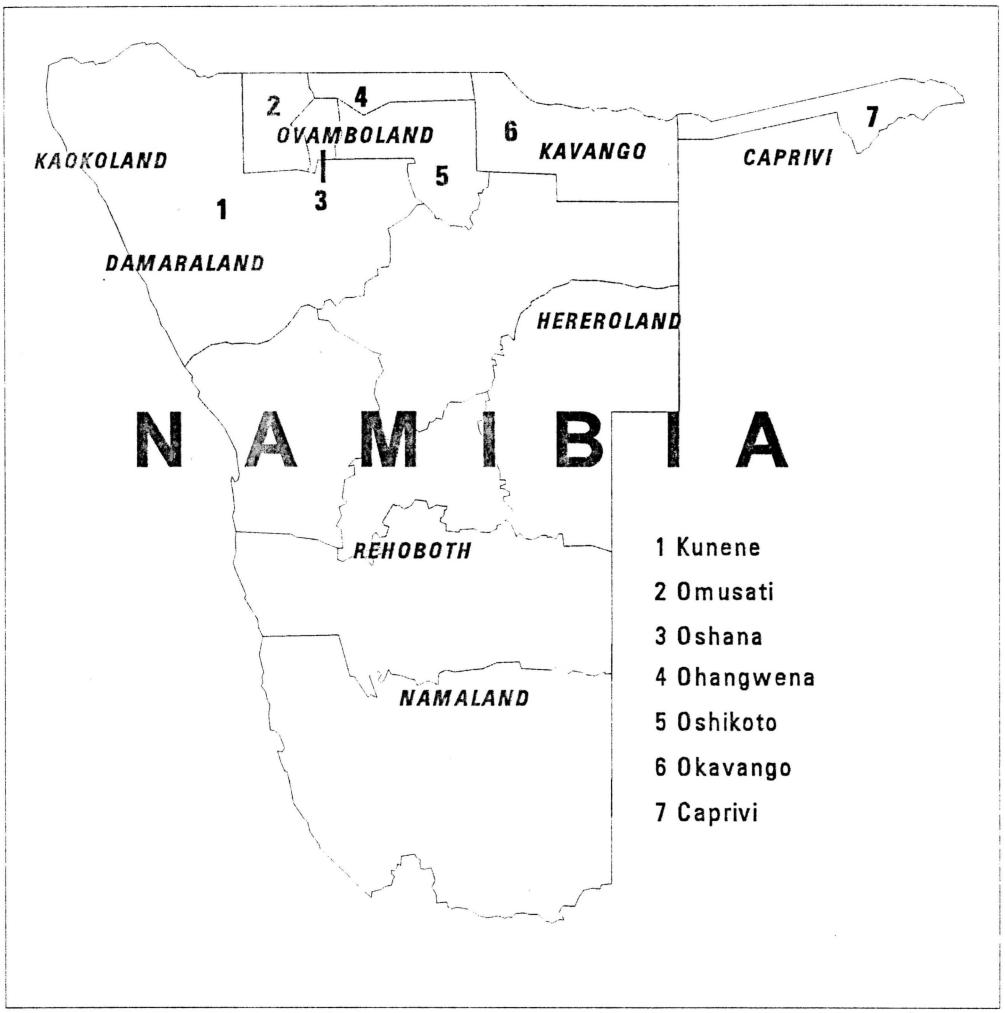

Figure 2.1 District map of Namibia. Communal areas at independence are shaded, and their names italicised.

with a human population of around 750,000. The current research area lies within this zone.

Previous accounts have provided a rather static view of communal tenure in which kings and chiefs effectively 'own' the land and headmen oversee allocation. Allocation decisions are referred to higher authorities only if the applicant comes from outside the area, and in such cases the consent of people living in the vicinity is also required (Hinz 1995b). Arbitrary allocation fees for arable land are payable in most areas of former Ovamboland (although methods of payment vary), but are less common elsewhere. Once allocated, rights over arable land are usufructuary with land reverting to traditional authorities for redistribution once the main occupier dies. Widows have no more right to the land than anyone else under this arrangement (although this contradicts statutory law). Grazing areas are available to all as open access commonage, although the number of stockholders entitled to access may vary locally. The payment of grazing fees, which was reportedly common before independence, is generally unheard of today (*e.g.* Fuller 1995).

Recent work has shown this 'typical' picture of tenure to be outdated. Far from being static, evidence suggests that customary practices are continually being re-interpreted in respect to both arable land and rangeland, and that 'the concept of usufruct as use only, and only for a lifetime, has almost certainly already shifted towards more stable private "ownership"' (Wily 1993: 8). The system of usufructuary rights is particularly threatened by the re-interpretation of inheritance rules, with direct land transfers to widows and male (but not female) children now being routine (and being supported by SWAPO policy statements). New security of tenure means that land is increasingly being treated as a commodity, with some reports indicating that allocation fees now reflect land quality or demand for land rather than arbitrary levels of remuneration for traditional leaders, which was more usual in the past. However, such reports are mixed and while allocation fees for agricultural land in densely populated areas may assume 'market value' (*e.g.* Tapscott 1990), in the water-scarce areas of Ohangwena and Oshikoto the practice of paying for land has all but died out (Kreike 1995).

2.2 Rangeland enclosure

If, as Wily (1993) suggests, security of tenure over arable land is increasing through subtle reinterpretation of customary practices, recent changes in the control of rangeland resources have been dramatic, and have often contradicted existing customary and statutory arrangements. Large areas of communal land around the northern and eastern fringes of the freehold zone (Okakarara, Oshikoto and Okavango) have been fenced in an effort to secure individual grazing rights (*e.g.* Adams and Werner 1990; Holme and Kooiman 1994; Tapscott and Hangula 1994; Fuller 1995). Although fencing in some areas dates back to the 1970s, activity has reportedly increased noticeably since independence and in many instances a 'land-grab' situation has ensued. Most enclosure is taking place in areas previously unutilised or only partly utilised.[1] In these areas fencing tends to be speculative (often on behalf of absentee landlords in Windhoek), and is usually carried out on a piecemeal basis depending on the amount of funds available at the time. Once enclosure begins in an area, it tends to gain momentum – with those who have not yet fenced off land, but can afford to, hurrying to enclose what land is still available. This process of 'defensive' fencing has been observed in Oshikoto, where after independence:

> '... individuals were of the opinion that since a process of fencing was already well underway, there would be no vacant land available once [land] reform measures were finally introduced. What ensued was something of a land grab which was premised on the belief that 'possession is nine tenths of the law.' (Tapscott and Hangula 1994: 8–9)

Fencing is not an option available to everyone. Obtaining permission to enclose areas of communal land depends on an individual having the necessary influence on traditional

[1]After the war it was estimated that more than 20% of potential pasture land (35% of the total land area) of Ovamboland was unutilised (Claasen and Page, *Die Republikein* 1990), while together Ovamboland, Okavango and Hereroland were estimated to contain about 11 m ha of unutilised or underutilised land.

authorities. Enclosure is also expensive, as it involves the payment of land allocation fees to traditional leaders as well as the cost of fencing itself. Taken together, these factors suggest that fencing is only an option for relatively wealthy and influential stock owners. On the ground their status is such that any challenge from the local population (and in some cases traditional authorities) is unlikely. In some cases fencing occurs without the assent of local leaders. This is rare, however, as without the support of the headmen it is difficult to prevent use by outsiders. More commonly, individuals will take advantage of the weak monitoring of land allocations by traditional leaders to fence off more than their allocation originally permitted (Tapscott and Hangula 1994; Fuller *et al.* 1996).

While enclosure movements elsewhere in Africa have been symptomatic of a 'bottom-up' type of tenure reform (*e.g.* Behnke 1985), in this case the involvement of elites from outside the local area indicates a more 'top-down' process, in which the local population has little say. Permission to enclose grazing areas typically comes from senior traditional leaders who themselves reside outside the area affected, and in many cases the local occupants only discover that a piece of land has been allocated once the fences go up (Fuller *et al.* 1996). The uneven pattern of resource control that arises in these circumstances is likely to accelerate social differentiation between those who are able to maintain a viable herd and those who are not. Concentration of ownership of cattle is already evident[2] – although its negative effects are mitigated somewhat by a system of cattle-lending.

Fencing raises particular concerns over access to key resources and herd mobility, with many farmers complaining that their seasonal transhumance routes have been disrupted (in this way illegal fences add to the restrictions already imposed by official fences). In many cases shortages of family labour may exacerbate this situation. The environmental implications of confining seasonal grazing to ever-shrinking areas of commonage are also likely to be significant. Although no reliable environmental data are available, visual evidence suggests that overgrazing can be extreme – especially in the narrow corridors which connect grazing areas and around boreholes (Tapscott and Hangula 1994). The fact that large areas of wet season grazing have been taken out of the communal system means that communal farmers are more likely to graze their stock in the vicinity of water points all year round (if possible), and this places an added burden on land around these water points.

Clearly any negative effects of enclosure should be weighed up against potential positive benefits in terms of rangeland productivity – and it is on the basis that commercialisation leads to increased productivity that many ranch owners justify their actions. Many commentators doubt the validity of this type of claim, however. Leaving aside the fact that in many instances open-range communal production systems yield more output per hectare than commercial operations under similar ecological conditions (*e.g.* de Ridder and Wagenaar 1984), the extent of commercialisation within most enclosures is debatable. While many enclosures have a semblance of commercial farms, it is unlikely they are supporting 'modern' commercial farming practices. Reports suggest that few have internal fencing or multiple watering points, and it is likely that many are not economically viable (TCCF 1992). Instead

[2] At independence it was estimated that 52% of households in northern Ovambo owned no cattle. In peri-urban areas of Oshikati and Ondangura, this figure was as high as 83% (UNICEF data reported in Tapscott (1990)).

they are generally used as grazing reserves in conjunction with conventional communal grazing practices. At present there are no data with which to compare the relative merits of individual or communal tenure in terms of economic/productive efficiency or social equity.

2.2.1 The legality of fencing in communal areas

Where fencing activity is restricted to previously unsettled or only lightly settled land, it may be difficult to dispute the opinion of large herd owners who claim to be doing 'nothing wrong' either morally or legally (under customary law unutilised land can be opened up by individuals at their own expense). It could be argued, moreover, that this is a literal interpretation of the Constitution, which guarantees the right to acquire property in 'any part of Namibia' and further 'to reside and settle in any part of Namibia (Articles 16(1) and 21(1[h])).

In fact the legal picture surrounding the enclosures is a mess, and there actually exists a range of legality (both in terms of statutory and customary law) within which the status of individual enclosures is often uncertain. Much of the fencing in communal areas is strictly *de jure*: large areas in Namaland, Damaraland and Hereroland comprise former settler farms (the 'Odendaal Farms'), purchased by the colonial government and incorporated as fenced and partially fenced units into the communal areas. These ranches were provided with basic infrastructure, including fencing and boreholes and were allocated on a leasehold basis to farmers by respective representative authorities. Details of their evolution and present status are sketchy, and it is likely that many ranches remain undeveloped (Moorsom 1994). In addition, many existing enclosures were created under the auspices of parastatals and local representative authorities. These include farms in the Mangetti Block which spans Oshikoto and Okavango, and which overlaps slightly with the current field area (see Figure 1.1). After the Mangetti block was developed the then Ovambo administration carried out its own borehole drilling programme in the areas surrounding the Mangetti block, and encouraged enclosure in areas outside the designated zone. Similar programmes took place in other areas, notably in Okakarara – and it was in this region that important legal precedents were set in which local farmers failed in their attempt[3] to challenge the Okamatapati community authority's policy of fencing communal land on the basis that it contravened Herero customary law (TCCF 1992).

Legal fencing set the pattern for future development and established a precedent for unofficial, 'quasi-illegal' enclosure. We use the term 'quasi-legal' here, because the legality of much of the copy-cat fencing is unclear. The only fencing that can be expressly called illegal is that which has gone on without the permission of local/traditional authorities. Overall, however, it would seem that the land allocations made by traditional authorities are honoured, and informal statements issued by government appear to legitimise these cases.

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[3] **Uazengisa and Others** *vs.* **The Executive Committee for the Administration of Hereros and Others** (Supreme Court of SWA, unreported on 22 September 1989), the court found the actions of Okamatapati authority to be legal under section 9 of Proc 178/1974 (TCCF 1992). This ruling is still significant today because Procs 177 and 178/1974 (and others) remain unrepealed.

Certainly there is little by way of statutory law that can be used against spontaneous enclosure – and arguably it has been the failure to devise and enforce adequate laws pertaining to land administration that has been most important in shaping current patterns of communal resource control. As van der Byl's (1992: 72) legislative review confirmed:

> '... the legal position pertaining to land occupied on a communal basis is, on the one hand, of an extremely complicated nature and, on the other ... of some doubtful validity.'

An examination of this legal history reveals a confusing web of legislation which has been developed in a largely piecemeal manner since South African colonisation in 1919. The weakness of this legislation, combined with the reluctance of the colonial administration to enforce much of it, created a vacuum in which traditional leaders and customary law were pushed to the fore. What resulted was a *de facto* system of resource allocation which, while bearing little relation to statutory law, nevertheless was highly effective on the ground.

Today's legislation remains characterised by a number of anomalies and unprincipled differences of detail (LAC 1991). Article 25(1[b]) of the Namibian constitution states that all laws in force at the time of independence remain valid until repealed, amended or declared unconstitutional by a competent court. Thus although the legal basis of the communal areas has changed over the years, unrepealed sections of Acts as far back as 1922 remain in force. Traditional authorities continue to enjoy a high level of autonomy and control over land matters, and arguably it is this factor that has been most significant in shaping current land use patterns.

2.3 Traditional authorities and land matters

Despite their steady emasculation under statutory law since 1922, chiefs and headmen continue to allocate land independently of government officials. Indeed, results from recent fieldwork carried out by Fuller (1995) suggested that most communal farmers were unaware that permission to reside on communal land comes (at least in principle) from magistrates or other government officers. For although traditional authorities had their ultimate powers over land issues removed, they did retain significant consultative powers regarding resource rights and dispute settlement (Fuller 1995), and were quick to exploit this legitimate mechanism for retaining effective power. Through these 'advisory' positions, traditional leaders were able to regain roles essentially similar to the ones they had before 1922.

The position of traditional leaders was further enhanced by the fact that colonial authorities had neither the political will nor the ability to involve themselves in land matters. Instead they adopted a policy of divide and rule by co-opting 'loyal' traditional leaders, who in return enjoyed a substantial amount of autonomy, which, according to most commentators, they duly exploited – not least through the manipulation of customary law. Many authors assert that this position has been maintained during the post-independence period. The dissolution of the Second Tier Authorities (the former Representative Authorities) in 1989 in particular, left a large hole in local-level administration, and traditional leaders were quick to fill the gap. The SWAPO government, on the other hand, was slow to install local or regional level authorities with real control over land. In the intervening period pragmatism dictated that traditional authorities retained *de facto* control over land matters:

> 'A tacit consensus has emerged amongst most parties, from local farmers to government ministers, in recognising the authority of traditional leaders to administer communal land. It has emerged partly because however damaged they were during the colonial era, traditional leaders in many communal areas retain a functional capacity for local administration and arbitration as well as a local knowledge which no other secular structure can match.' (Moorsom 1994: 39)

Authors also question whether the version of customary law presented by traditional leaders is 'valid' or comparable to pre-apartheid practice (the co-option of headmen under the South African regime brought about considerable modification to pre-existing customary laws both by the colonial administrators and by the traditional authorities – Hinz 1995a). According to Gordon (1991), the South African administration successfully used customary law as a means of policing the local population through traditional leaders:

> 'Customary law was so cynically manipulated to maintain the South African presence in Namibia that it has been thoroughly stripped of local legitimacy and is therefore unusable.' (Gordon 1991: 3)

This arrangement suited government and it also suited traditional leaders, who were quick to reinterpret customary law in the manner that best suited them. Given the autonomy granted to them by the colonial administration, traditional leaders had 'ample scope for elaborating and manipulating 'tradition' and garnering great amounts of wealth from the definitional fuzziness of their traditional laws and powers' (Gordon 1991: 17). They were particularly keen to keep the turnover in land ownership as high as possible, so as to maximise their income from land allocation fees. This they achieved by continuing to stress the life-time usufruct and the lack of transferability of land, and also through the distortion of widow inheritance rights (contrary to statutory law). As such the interpretation of 'modern' customary law became so divorced from 'tradition' that it ceased to function in a socially acceptable way (Plant 1992: 6)

There is still some uncertainty regarding the position of traditional leaders and their powers with respect to customary law. The 1994 Traditional Authorities Act contains a large grey area concerning the powers of traditional leaders on the ground. While, on the face of it, their powers seem somewhat restricted (they are subordinate, for example, to Regional Councils) they are still provided the significant responsibility of 'ascertain[ing] the customary law applicable in the traditional community in consultation with the members of that community and assist[ing] in its codification' (GRN 1994a). In general, recent government statements suggest that traditional leaders will have a prominent role in future land legislation (see below).

the Namibian public still does not trust traditional authorities and are generally resentful of their re-acquired status (NEPRU 1991a; NGO–WCLR 1994). The main concern is that the practice of traditional leaders granting permission (after suitable remuneration) for enclosures has become legitimised by government (see Cox and Behnke 1995: 11).

2.4 Government policy

After independence SWAPO was quick to announce its intentions for major land reform, but six years on little has been done with respect to communal land. To date SWAPO's main achievement has been the enactment of the 1995 Agricultural (Commercial) Land Reform Act (ACLRA), under which it is empowered to acquire land for redistribution. However, as yet no decisions have been made regarding which land will be acquired, how it will be procured and to whom it will be distributed. As yet no legislation comparable to that of the ACLRA has been introduced in communal areas – although various provisions in the Traditional Authorities Act (1994) and Regional Councils Act (1992) impinge indirectly on land matters. Although the long overdue Communal Land Bill been drafted, and recently published, it is our understanding that there will be considerable delay before it is enacted (see below).

Government action has been largely limited to making statements against illegal fencing in communal areas. In 1990 Cabinet decreed that 'illegal fencing should be declared null and void and all communal farmers, whether big or small, should have equal access to pastures in the communal areas' (quoted in Wily 1993). During a national consultation on land issues in 1991 the President and other government officials reiterated this view. The Technical Committee on Commercial Farming has also echoed these recommendations, calling for the 'protection of access to traditional communal land by preventing the privatisation of land through fencing.' It further recommended that 'all present and future unauthorised fencing of communal land should be declared illegal' and that 'further traditional allocation of communal grazing land be prohibited until such time that a proper land use plan has been drawn up' (TCCF 1992: 151–152). Most recently, the President, in his speech to Chiefs and Traditional Leaders floated for the first time the idea of a moratorium on 'illegal' fencing, stating:

> '... I intend following the proper channels to ensure that a moratorium on the allocation of lands in communal areas which are more than ten hectares in size is put into place as soon as possible ... Potential landgrabbers should note that I intend, within the law, to make the effect of such moratorium retroactive to today's date ...
>
> In conclusion I now want to make it abundantly clear that there would be no more illegal fencing off of land in communal areas *without the express authorisation of Chiefs, Headman* [sic] *and Traditional Leaders who are responsible for land administration in their respective jurisdictions*' (emphasis author's own)
>
> President Sam Nujoma, 15 March 1997

Encapsulated within this quote is what many see as a basic ambivalence regarding the fencing issue: on the one hand there is a perceived need on the part of government to be seen to be taking a firm stance on fencing; on the other there are problems, practical and otherwise, in seeing such edicts through. In this case, the second paragraph rather undermines the first by only including within the term 'illegal' fencing that takes place without the consent of traditional authorities. In other words the moratorium has no implications for the vast majority of land allocations being made.

Critics argue that the lack of tangible government action reflects its fundamental reluctance to intervene in the process of spontaneous tenure change. There are several possible reasons for this. First, because public pressure for correcting the perceived inequality of land distribution still persists, the question of land reform has become informally re-defined as one of land redistribution – with 'equity' being an issue between Black and White farmers, not between Black and Black. Government has been preoccupied in its efforts to broaden access to white commercial areas and has paid relatively little attention to communal tenure issues.

Second, and more controversially, it could be argued that it is not in the government's interest to bring about a quick clarification of land issues in the communal areas. Members of government benefit directly (through the freedom to develop their own farming interests) and indirectly (through the support of local elites) from the fuzziness of the tenure situation.

Third, and most likely, the *laissez faire* approach of government may hide tacit approval for the manner in which communal resource control is evolving. This philosophy is grounded on the persisting view that communal agriculture is backward and inefficient in comparison to commercial farming. While inadequate infrastructure and marketing have been part blamed for this, more often traditional tenure is seen as the prime obstacle preventing progress to 'modern' modes of production. This idea that communal tenure is inimical to progress is based on sectoral comparisons of marketed output (in Namibia 90% of the total marketed agricultural produce is produced by the commercial sector) and is reinforced by the perceived reluctance of farmers and pastoralists to sell their cattle. The 'tragedy of the commons' thesis also runs deep in Namibia, and there is a general feeling, particularly among commercial farmers, that overgrazing and land degradation are synonymous with collective resource management (*e.g.* Elkan *et al.* 1992).

While government has made no official recommendations regarding the future of the communal areas, a policy statement accompanying the ACLR Bill provides some significant clues as to where its intentions lie (GRN 1994b). On the issue of land allocation, it appears that chiefs and headmen will continue to exercise their powers under customary law on the basis of procedures recommended by land boards (GRN 1994b: 34). These would be responsible for matters of allocation and administration, but disputes would be settled by bodies of a more judicial nature. For arable land, households would be given 'certificates of grant', with the option of converting these to (inheritable) lease agreements. Lessees would pay ground rent, which would 'serve as a means of encouraging development of the holding' (GRN 1994b: 36).

In terms of grazing land government seems keen on changing the present open access mode of tenure to that of a common property regime by allocating common land to specific rural communities. Disputes would be overseen by newly-established land tribunals incorporating mobile adjudication commissions operating *in loco*, whose role would be to 'clarify the issues commonly referred to as illegal fencing' (GRN 1994a: 38). Enclosure owners would be considered lessors, paying ground rent to the government.

Most (but not all) of these ideas have been included in the draft version of the Communal Land Bill, which provides for the classification of communal land and for the regulation for its use and lease through regional boards. Under the Bill land regional boards will be responsible for land allocation, although on what basis allocation decisions will be made, or under what rules the envisaged adjudication commissions will operate is unclear. It is also

unclear whether these commissions will adjudicate cases of fencing that pre-date the Act. According to one legal consultant the Bill as it stands 'is seriously deficient in many fundamental respects' and does not 'form a credible basis for legislation' (McAuslan 1995: 1,5). It is therefore unlikely that any new legislation will be enacted in the near future. As such, government options for land reform in the communal areas are still wide open, and policy formulation can still benefit from original research.

2.5 Summary

This section of the report has set the broad context of the enclosure issue in Namibia. Beginning in the 1970s and accelerating since (especially since independence), enclosure has brought about significant shifts in resource control in northern Namibia. This trend has worried many commentators, particularly on the grounds of equity. Few local inhabitants have the financial means to engage in private fencing schemes, and most farmers are forced to use whatever land remains. Reports indicate that the new enclosures have negative impacts on herd mobility (and specifically transhumance), access to key resources and natural resource conservation. The counter-argument provided by proponents of private fencing is that enclosure is a prerequisite for improving animal production in the communal areas. However, few commentators appear to have taken these claims seriously; more often they see enclosure owners as taking advantage of dual grazing rights by using their private grazing reserves in conjunction with communal resources. There are, however, few data with which to assess these and other claims.

The messy legal situation regarding communal land has had important direct and indirect effects on resource control. The most significant direct effects have come through the series of Proclamations spawned by the recommendations of the Odendaal Commission. These paved the way for community authorities and representative authorities to enclose land and grant individual title, thereby creating a clear precedent for quasi-legal enclosure. At the local level, the indirect effects of government legislation are perhaps felt even more keenly. The vagaries of the law, have created a vacuum in which traditional leaders have managed to regain authority. It is perhaps this ambiguity above all – both in terms of traditional authority *vs.* government control and statutory law *vs.* customary law – that creates the latitude necessary for private enclosure of communal land. If so, addressing this area is a prerequisite for successful government intervention on the enclosure issue.

3 THE EVOLUTION OF LAND TENURE IN OSHIKOTO

WOLFGANG WERNER

3.1 Introduction

This section seeks to trace some of the historical developments which may have shaped recent enclosures. More specifically, it attempts to describe the processes of internal colonisation as well as customary and statutory land tenure arrangements within the study area. Research for this paper was began with a ten day field trip to Oshikoto Region in July 1996 with Carol Kerven. Through open ended interviews with both villagers in and around Okgumbula as well as traditional leaders and the King's Council, first impressions were gained about the recent history of land settlement in south-eastern Oshikoto Region and forms of land tenure. This initial stint of fieldwork was followed by going through secondary sources. These consisted mainly of PhD research materials, government reports and the Debates of the Ovambo Legislative Council and subsequent assemblies. As secondary sources on the research topic are limited, they were augmented by primary research in the National Archives of Namibia (sources are detailed in Appendix 1). Permission was obtained to go through archival material as recent as the late 1970s. A second trip to Oshikoto served to obtain more detailed information from key informants.

Historically, the research area was part of the former Ovamboland, as defined by *Proclamation 40/1920*, and was set aside as a reserve 'for the sole use and occupation of natives' by the *Ovamboland Affairs Proclamation, 1929*.[4] In the north and west Ovamboland was bounded by Angola and the Kaokoveld respectively, while its southern boundary was formed by the Etosha Game Park and the district of Tsumeb. To the east, its border ran in a straight line along 17°30' E from the Angola–SWA border until it intersected with the straight line separating it from Etosha. A wedge shaped piece of land referred to as the *Unnamed Area* separated Ovamboland from Okavango. This land was set aside as a native reserve by Government Notice 193/1952 but was 'apparently added neither to Ovamboland nor the Okavango Territory.'[5] In the south-east, Ovamboland was separated from the commercial farming area in the Tsumeb district by a piece of state land measuring 247,000 ha. After independence Ovamboland was split up into four separate regions, as defined by the Delineation Commission. The study area is now in Oshikoto, a region which includes commercial ranches in the south (formerly Tsumeb district) and 'communal' areas in the north.

In 1964, the *Odendaal Commission* recommended that Ovamboland be slightly enlarged, proposing that the two areas mentioned above, plus a small portion of Etosha Pan in the west be added to Ovamboland. These additions would have increased the total size of the area from 4.2 m ha to 5.6 m ha, but in the end the eastward section was only extended as far as

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[4] RSA, *Report of the Commission of Enquiry into South West African Affairs 1962–3*, RP 12/1964, para. 249, p.69.

[5] Ibid, para. 251, p.69.

18°E, rather than 18°15' E as was originally recommended. As we shall see, the significance here is not so much the overall extension of former Ovamboland, but the fact that sections of land were added to Ndonga territory in the south and east.

3.2 Customary land tenure arrangements

Former Ovamboland was occupied by eight different population sub-groups. Since all these sub-groups speak different dialects of the same language and practice the same kind of agriculture, conventional wisdom has presented a rather static and uniform picture of land tenure systems in the region. In particular, the powers of chiefs with regard to land allocation and administration, as well as the importance of ethnicity in obtaining access to land, seem to have been overstated (NEPRU 1991b). The *Report presented by the Government of the Union of South Africa to the Council of the League of Nations concerning the administration of South West Africa for the year 1929* carried this portrayal of Ovambo land tenure beyond the boundaries of the then SWA to international fora. Amongst other things it stated that:

> 'Each tribe inhabits a well-defined area in which it carries on an independent system of government. There is no such thing as individual ownership of land as understood in our law. The chief is the undisputed ruler over the whole tribal area and the land is regarded as his property, though he administers it for the benefit of his subjects. No native may reside or cultivate land within a tribal area without first becoming a member of the tribe.' (Union of South Africa 1930: 99)

These 'independent systems of government' did create 'clear differences in rules to land tenure and land use within Ovamboland' (NEPRU 1991b: 549), and to some extent these differences reflected the differential impact that colonial domination had had on indigenous communities. In the Kwanyama and Ombalantu communities, for example, former Kings had been replaced by councils of headmen (Union of South Africa 1930). Nevertheless, despite some regional differences, land tenure in all eight communities of former Ovamboland was broadly structured along two categories of land (NEPRU 1991b):

> — Settled or inhabited land (*shilongo*) on the one hand and uninhabited land or bush areas (*ofuka*) on the other; and
>
> — Residential, arable and grazing land.

In the inhabited areas or *shilongo*, land for cultivation and residence was allocated through a hierarchy of traditional leaders. In pre-colonial and early colonial times, 'the Chiefs or Kings of the various communities in Ovamboland had the ultimate right to allocate land in the inhabited parts within their jurisdiction' (NEPRU 1991b: 555). However, in some parts, allocation rights had been transferred to headmen. For example, among the Kwanyama, who did not have a King, eight principal headmen exercised the rights of the chief in respect to land allocations.[6]

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[6] A 450 Vol.9 2/38 Typed manuscript of the Tribal customs of the Ovambos. Property Rights, nd, p.29. See also NEPRU (1991b: 556–7).

Where Kings still existed, their territory was sub-divided into a number of 'districts' under the authority of 'headman-councillors' (later referred to as senior headmen), who were 'responsible to the tribal council.' Districts, in turn, were composed of several wards or *omikunda (omukunda*, sg.). *Omikunda* were granted to people who could afford to pay a certain amount of cash or cattle. Upon payment, the new 'owner' became a headman with certain rights and responsibilities. Apart from 'exercising native administration and judicial authority'[7] in their *omikunda*, headmen were entitled to 'sell' portions of their *omikunda* to individual homesteads (Hinz 1996: 31). The sizes of *omikunda* varied, but 'comprise[d] anything from 10 to 100 or more kraals [homesteads].'[8]

Generally, the payment for land applied only in the inhabited areas or *shilongo*, and changed according to the degree of land pressure. In the less densely populated parts of the north-west, payments were lower than in the Cuvelai area. In the 1920s, allocation fees for residential and arable plots were applicable in the Ndonga, Ongandjera, Ukuambi and Ukualuthi areas. No payments were required in other communities. Payments depended on the size of the plot, ranging 'from two goats or sheep to three or four Pounds Sterling in Ukualuthi ... to one or two head of cattle in Ondonga ...' (NEPRU 1991b: 551). As pressure for land increased and settlement extended eastwards, payments followed, and payments for land in the eastern Kwanyama area were reported for the first time in the late 1940s (NEPRU 1991b). It appears to have been the custom in the Ndonga area that 'should it become necessary to eject an allottee before he has reaped at least one crop this payment must be refunded.'[9]

3.2.1 Rights and responsibilities

In general, payment of a fee ensured access to residential and arable land and use rights 'which can best be described as being a sort of permanent usufruct, subject to good behaviour and loyalty to his chief.'[10] With the exception of marula trees, the rights of heads of homesteads 'included not only unlimited use of the land itself, but also rights of first access to waterholes, wells, and trees on or near the plot' (NEPRU 1991b: 554).

> 'Within the inhabited area (*shilongo*) a waterhole situated in a cornfield or closely contiguous, accedes to the corn field. The occupier of such field becomes the occupier of the waterhole. This right cannot be alienated; the accession is complete.'[11]

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[7] A 450 Vol.7 2/18 *Annual Report 1937*, 22.12.1937, p.13.

[8] *Ibid.*

[9] NAO Vol.9 2/12 Native Tribal System of Land Tenure in Ovamboland, nd [1929], p.5.

[10] *Ibid*, p.3.

[11] A 450 Vol.9 2/38 Typed manuscript of sections of the Tribal Customs of the Ovambo, nd, p.31.

The ownership of waterholes outside a field was determined by the 'importance of the man who made it or caused it to be made:'

> 'If he was an important, rich or influential person, the waterhole is inalienable and accordingly his relatives cannot inherit it. The rights over it pass to the person who succeeds him, *i.e.* the person who is appointed in his place.'[12]

While use rights of allocated land were extensive, the latter could not be allocated to anyone else by the head of a homestead, 'be it through sale, gift or inheritance'(NEPRU 1991b: 554). Upon the death of the head of the homestead, the headman of the *omukunda* could reallocate the land against a payment (Hinz 1996).

These rights to residential and arable land also came certain responsibilities regarding the protection of resources and the protection of persons using the resources (see NEPRU 1991b for more details). Indeed the colonial administration found these responsibilities so extensive that it felt it necessary to change them.

3.2.2 Grazing land

Available written records reveal very little about land tenure arrangements regarding grazing land. The section dealing with this issue in the report to the League of Nations in 1930 devoted only four lines out of two pages on the subject, stating simply that:

> 'The grazing grounds are common to all members of the tribe both in the inhabited and the uninhabited portions of the tribal area. The chief alone has the right to reserve any place for grazing.' (Union of South Africa 1930: 99).

During the early part of this century Ovamboland had large reserves of unused land. Interstitial areas between different polities were kept as long as possible for grazing purposes. In addition, herd owners made use of cattle posts in the bush or *ofuka*. Much of the land in the study area was considered to be waterless and thus could not be settled or used on a permanent basis, and utilisation was limited to seasonal grazing. This was observed in the mid–19th century when the traveller Charles John Andersson visited the Ndonga area. Although the inhabitants were known 'to be possessed of vast herds', he found no cattle at their homesteads as a 'general scarcity of water and pasturage in Ondonga compelled them to send the oxen away to distant parts.'[13]

Despite the long distances to most cattle posts, rights of 'ownership' were exercised in some cases. Given the importance of water, ownership rights to a cattle post 'usually hinged on ownership of the water supply which sustained the site as a cattle post' (Kreike 1994a: 25). It had also been noted that:

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[12] *Ibid.*

[13] CJ Andersson, *Lake Ngami*, p.190

> 'well established cattle posts (with waterholes) have definite owners ... [while] at other posts the first man on the post each year acquires the right of user. Every new waterhole dug in the bush belongs to the man who digs it.'[14]

More generally, while the 'owner' of a waterhole at a cattle post had the right to satisfy his needs first, 'the water itself is incapable of ownership.'[15] It could not be alienated by sale, for example, but could be passed on to heirs (Kreike 1994a). Neighbours were allowed to draw water, 'provided that they have assisted in the annual opening up and cleaning of the waterhole after the rains.'[16] In fact rights to a waterhole often lapsed through continued disuse and neglect (Kreike 1994a).

3.2.3 Ndonga land claims and 'bushmen'

Ndonga claims to *ofuka* in the east and north-east were rather weak, probably because most of this land was considered to be waterless and thus could not be settled. As a result, this area 'was mainly used as hunting grounds by former Ondonga chiefs.'[17] However, as land pressure in the inhabited areas grew, this land became used increasingly for seasonal grazing. During bad droughts in the first quarter of this century, Ndonga herdsmen were said to have moved with their cattle as far east as Omshilonga (*c.* 17°30' E, 17°40' S). Local bushmen stated, however, that 'no cattle have ever been seen south and south-east of Omshilonga',[18] the area known as 'Omaheke bush.'

> 'For generations Bushmen have lived here and have established more or less permanent settlements. Each group has its well-defined territory and it moves from waterhole to waterhole within its boundary.'[19]

Although the Bushmen or San communities clearly enjoyed ancient rights to the land in eastern Oshikoto, transhumance by Ndonga or Kwanyama herdsmen seemed to cause little friction (see Box 1). Documentary evidence suggests that Bushmen regularly attached themselves to Ovambo families, 'invariably [as] servants, hunters and herdsmen' for 'wealthier Ovambos.' In bad seasons they obtained food from Ovambo families,

> 'and it is often because of this friendly intercourse that ... old or detached Bushmen, who can no longer eke out an existence in the wild veld ... attach themselves to settled communities ... [Moreover] when once they have taken

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[14] A 450 Vol.9 2/38 Typed ms of Section of the Tribal Customs of the Ovambos, nd p.32

[15] *Ibid.*

[16] *Ibid.*

[17] A 450 Vol.7 2/18 *Annual Report 1937*, 22.12.1937, p.2.

[18] NAO Vol.10 5/7/1 Assistant Native Commissioner, Oshikango to Native Commissioner, Ondangua: Proposed extension of Ukuanyama area, 10.7.1942, p.7.

[19] *Ibid.*

to agricultural or pastoral pursuits, they seldom revert to their original wild life (*sic*).'[20]

The function of herdsmen went beyond simply looking after Ovambo cattle. Because of their intimate knowledge of the eastern parts of the country, they were useful to Ovambo cattle owners in leading them to resources. In the early parts of this century, they seem to have played an 'increasing role in the long distance transhumance system' of Ovambo cattle owners' (Kreike 1994a: 24).

While seasonal grazing in the eastern Ndonga area seems to have taken place regularly, it was reported in the late 1940s that a prohibition existed among the Ndonga to cross the riverbed at Okankolo to the east, with the aim to clear bush for new fields:

> 'It is an *ohithila* (forbidden things) for the Ondonga people to cross the riverbed in the East-Ondonga (Okankolo) to clear bush and to make new fields in that fertile soil, though the people are very much pressed to live together in the small and unfertile fields in the middle and South Ondonga.'[21]

The report continued that while *ithila* could be fined, 'there are no such forbidden things' where there were no 'big chiefs.' This seems to suggest that in the case of the Ndonga, the king and his senior councillors were directly involved in the management of land resources.

3.2.5 Tenure security

Historical evidence suggests that customary tenure was reasonably secure, although colonial records display a certain ambiguity regarding tenure security. This was undoubtedly influenced by the desire of the colonial administration to obtain more control over the process of land allocation.

Powers of eviction varied from community to community. In some instances such as Ukwambi, headmen were denied the right to evict households from their land. In other areas, headmen, as the allocating authority, had the authority to evict heads of households from their plots (NEPRU 1991b). Reasons for eviction included instances where 'an individual proves a disturbing factor in any section of the tribe', where 'an allottee is not able to cultivate his fields to the same extent as did his predecessor' or is guilty of 'disloyalty or treason. In such cases the individual is ordered to leave the tribe and forfeits all his crops, including corn already reaped by him' (Union of South Africa 1930: 99–100).

In pre-colonial times, Chiefs and headmen were said to have been 'frequently influenced by bribes and political considerations' to deprive individuals of their land under false accusations' (Union of South Africa 1930: 99; NEPRU 1991b: 558). These instances were cited by the colonial administration as a way of demonstrating that land tenure was insufficiently secure. In subsequent attempts to make 'tenure of land as permanent as possible', the South African administration introduced restrictions on the powers of

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[20] A 450 Vol.7 2/18 *Annual Report 1940*, pp.30–31.

[21] NAO Vol.71 32/7 Native Commissioner Ovamboland to Secretary for South West Africa, 21.4.1947, p.2.

Box 1 Bushmen

The Bushmen Groups in the far Eastern and North-Eastern Ukuanyama country are generally referred to as the Kau-Kau Bushmen. They belong to an altogether different group to that of the Heikum. Their language is quite different...Their main hunting reserves are very extensive and extent (*sic*) a considerable distance into Southern Angola and towards the Okavango, north of our border. This area also includes the Oshimpoloveld where there is always water and game and a good variety of wild fruit ...

The most important group in Eastern Uukwanyama and Ondonga is the Chwagga group, which has its permanent settlements some twenty or thirty miles South and South-East of Omshilonga, in what can be called the Omboto area. This group has been settled there for generations. The old leaders I met informed that they had always lived in that part of the country and that as far as they knew, their forefathers had always been there ...

Their relations with the Ukuanyama are excellent. The Ukwanyama look upon them as children and are always keen to do them a favour. I have never heard a complaint from Bushmen against Ukwanyamas or by Ukwanyamas against Bushmen. Stock theft by Bushmen is to my knowledge unknown. They are very friendly with the Ovambo herdsmen at the cattle posts as they generally obtain milk from them. They actually like to have cattle posts fairly near their settlements. Ule, the most important leader of the Wachwagga, informed me that he welcomes Ukwanyama cattle posts in his area.

Source: A 450 2/18 *Annual Report 1940*, pp.30,39

traditional leaders to evict people. In those cases where Kings no longer existed, headmen were:

> 'required to refer any questions of ejectment to the offices of the Administration, because it has been found that although many of them are capable and efficient administrators, they lack the sense of responsibility of a chief, which makes them too easily influenced.' (Union of South Africa 1930: 99).

Government intervention appeared to have some effect on ejectments: in the late 1920s the Administrator reported that evictions 'seldom happen today'(Union of South Africa 1930: 100). Indeed, one analyst has argued that 'this [was] the one area where the colonial administration actually restricted the powers of Chiefs and headmen' (NEPRU 1991b: 558).

3.3 Statutory land tenure

The discussion above provides a brief historical view of customary land tenure practices. With the advent of colonialism and more specifically the onset of South African rule in South West Africa, the issue of ownership to and rights in communal land became 'governed by a mixture of general law and customary law' (Hinz 1996: 4). The question therefore arises as

'to what extent the power of traditional authorities to allocate land has survived inroads into customary land law' (Hinz 1996: 18). This issue seems particularly important to the discussion of enclosure of grazing land.

Several pieces of legislation were introduced by the colonial government with implications for land allocation and administration. After a thorough review of these laws, Hinz (1996) concluded that none of the legislation affected customary law and, by implication, customary powers of land allocation. The following information is taken largely from his review, as well as those of Hubbard (1991) and van der Byl (1992).

The *Treaty of Peace and South West Africa Mandate Act, 49 of 1919* was the first piece of legislation introduced by the South African government with a bearing on land matters. It provided the Administrator with powers to grant title on reserved land. Despite the potential effects this may have had on customary land allocation and rights, Hinz concluded that while the Act restricted the rights of traditional authorities to allocate land geographically, 'it did not encroach into the provisions of customary law to allocate land as such' (Hinz 1996: 19).

The *Native Reserves Regulations, GN 68 of 1924* which were promulgated in terms of the *Native Affairs Proclamation, 11 of 1922*, laid down certain restrictions on land allocations by headmen in 'native reserves.' In terms of an amendment passed in 1941, however, Ovamboland was excluded from these regulations:

> 'Therefore, whatever inroads into customary law the Native Reserve Regulations provided for, these inroads never came into effect in ... the then Ovamboland and Kavango.' (Hinz 1996: 22).

The limitations of powers of chiefs and headmen set out in the *Regulations Prescribing the Duties, Powers and Privileges of Chiefs and Headmen, GN 60 of 1930* applied only to headmen appointed by the government in terms of the *Native Reserve Regulations*. These were not headmen in a traditional hierarchy. For the latter, *GN 60 of 1930* 'meant a confirmation and to some extent specification ... of their customary law power to allot land' (Hinz 1996: 25).

The *Bantu Areas Land Regulations, R188 of 1969* were framed under the *Development Trust and Land Act, 18 of 1936*. They introduced the Permission to Occupy (PTO) system in communal areas, a system

> 'defined as 'permission in writing granted or deemed to have been granted in the prescribed form to any person to occupy a specified area of Trust land for a specific purpose.'

PTOs could only be granted by the responsible Minister 'after consultations with the tribal or community authority.' As *R188 of 1969* 'did not spell out the needed explicit invalidation of customary law with regard to the allocation of land', it did not affect it (Hinz 1996: 27–28).

From the late 1960s on, Ovamboland underwent a series of constitutional changes as recommended by the *Odendaal Commission*. In 1968 the Ovamboland Legislative Council was established, and in 1973 the area was declared a self-governing area in accordance with the *Development of Self-Government for Native Nations in South West Africa Act, No.54 of 1969* (Hubbard 1991: 52). As these proclamations did not transfer any land to the new

Ovambo Government, 'nobody was certain to whom the land belonged.'[22] Concern was also expressed that the powers and functions *vis à vis* land allocations and administration of tribal councils and magistrate's offices were vague. The Planning Advisory Committee which was established in the early 1970s therefore recommended that all land in Ovamboland should be vested in the new Government and that all applications for land allocations be channelled through it.[23]

No legislative changes seem to have been introduced to implement these recommendations until 1980, when the *Representative Authorities Proclamation, 1980, AG.8 of 1980* was promulgated.

> 'Sec 48bis (3) of the Proclamation made provision for the executive authorities of representative authorities to confer a valid title to the ownership of, or any other right in, to or over, any portion of such (communal) land.' (Hinz 1996: 28–29)

The *Representative Authority of the Ovambos Proclamation, AG.23 of 1980* replaced the Ovambo Legislative Council with a Representative Authority. While the proclamation provided for the continued retention of the powers and function of traditional leaders prior to the establishment of the new Representative Authority, it also applied Sec. 48bis of *AG.8 of 1980* to Ovamboland. In law, therefore, the executive committee of the Representative Authority was entitled to alienate communal land and grant title over it, 'provided that a period of 15 years (or a shorter period determined by ordinance of the Legislative Assembly) elapsed after such registration.' AG.8 and AG.23 thus provided for the establishment of new forms of land tenure (*i.e.* title) without necessarily affecting the powers of traditional authorities to allocate land.

3.4 The process of enclosure

From the previous section it seems clear that statutory legislation made few significant inroads into customary forms of land allocation and administration in Ovamboland. If anything, colonial policies seem to have bolstered the powers of traditional leaders, although this has not been convincingly demonstrated (NEPRU 1991b: 555–8). The large scale enclosure of communal pastures does suggest, however, that fundamental changes have taken place with regard to the allocation and control of communal land. The remainder of this section of the report will try to identify some of the factors which may have shaped these changes. It shows that contrary to widespread beliefs, the fencing of communal land in Oshikoto Region does not necessarily signify the dissolution of customary forms of land allocation and management. Instead, enclosures were a response sanctioned initially by the Tribal Authority in defence of its territory against perceived alienation by the colonial government.

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[22] OVA 45 6/8/1–7(ii) Ovambo Beplanningsadvieskomitee. Notule van 'n Vergadering gehou op 21 Augustus 1973, p.2.

[23] *Ibid.*

In seeking to understand the history of tenure change and specifically the enclosure of communal land, it is important to recognise that enclosure through fencing is the 'culmination and not the commencement of the processes that transformed the communal lands' – processes characterised by 'conflict among users and among different rights and competing uses in a situation of political and economic change' (Peters 1987: 177). In the following sections some of the sources of tenure change will be identified. Bruce (1987: 10) has identified a number of possible sources of change: 'innovation in agricultural technology ... changes in population densities ... drought and famine.' With regard to the study area, the establishment of colonial boundaries should be added to this list, as this had an impact on some of the factors identified above. Two major issues will be discussed specifically here:

— Internal colonisation as a result of increasing population numbers; and

— Development policies aimed at 'modernising' the agricultural sector.

3.4.1 Internal colonisation: population pressures

At the beginning of the century, increasing population numbers brought increasing pressure to bear on the land, which in turn led to the gradual diminution of the interstitial areas. According to Kreike (1994a: 4) natural resources in the inhabited parts of Ovamboland were already becoming scarce by the mid-1920s:

> 'Owing to the intensified system of cultivation of the land, there is very little grazing in the vicinity of the kraals, and, the water supply being inadequate, the cattle are sent to cattle posts for the greater part of the year.'

This situation was compounded by various border demarcations which followed in the wake of new South African control. Initially the demarcation of the border with the Etosha Game Park as defined in the *Prohibited Areas Proclamation, 1928*, limited the grazing available to Ndonga herdsmen – a situation exacerbated by developments in Angola and the demarcation of the SWA–Angola border. Portuguese colonial policies differed in some fundamental ways from those pursued in South West Africa. Amongst other things, the Portuguese had imposed a hut tax and implemented military service and a forced labour regime. In addition, 'the wage labour-market was smaller and pay almost always lower' than that in SWA (Hayes 1992: 266). On the other hand Angola contained large areas of comparatively underpopulated country, with better water and grazing conditions. Many Kwanyama were therefore faced with a choice between 'more favourable ecological conditions as opposed to more favourable administrative conditions.' In the event 'ecology tended to tip the balance' in terms of these decisions (Hayes 1992: 267), and movements across the border with Angola occurred almost continuously. Cattle owners in the Ovambo floodplains regularly took their cattle into the Oshimolo–Cubango area of southern Angola, and while the transhumance calendar changed from season to season, 'cattle usually (stayed) at the cattle posts throughout the dry season' (Kreike 1994a: 11).

By the mid-1920s the Union Government and Portugal had reached agreement over the boundary between Angola and SWA, although 'stock watering rights for residents of SWA who had previously enjoyed access to the Kunene River remained undecided well into the 1930s and beyond' (Hayes 1992: 265). In October 1928 a team of surveyors began to mark

out the beacons and clear the boundary line, causing much concern among Kwanyamas 'as to what would be their ultimate place of residence' (Hayes 1992: 269).

Most traditional Kwanyama farming land lay in southern Angola. On the SWA side of the new border, farming land occupied only a relatively narrow strip. At around 1920, the eastern border of their territory was said to have run south of beacon 22, corresponding roughly to 16°E: 'the territory east thereof was considered waterless, uninhabitable and useless to both men and stock.'[24] Moreover, 'the bush is very narrow between the Portuguese and Martin [*i.e.* the Ondonga territory], it looks like a footpath, it is not enough for one headman's cattle.'[25] In the west they were 'hemmed in by the Ombalantus, on the south-west by the Ukuambis and on the south and south-east by the Ondongas.'[26] Southward movement, for the time being, 'was prevented by friction over land and watering points by similarly expanding Kwambi and Ndonga neighbours' (Hayes 1992: 270).

The onset of a serious drought in 1928 and looming famine in 1929–30 once again pushed many Kwanyama north across the Angolan border (Hayes 1992). For many years the Kwanyama grazed most of their stock in Angola, 'where grazing and watering conditions are far better than those prevailing here.' The reliance on Angolan grazing was particularly important during bad years (Kreike 1994a: 33). The Portuguese authorities attempted to discourage trans-border traffic of cattle during the inter-war years, 'without ever really completely disrupting the trail', while after 1945 'South African and Portuguese interests to close the border began to converge' (Kreike 1994a: 411). Of increasingly importance in this respect was the argument that closing the border with Angola was the only way of ridding Ovamboland, Kavango and Kaokoveld of animal disease.

3.4.2 Eastern Kwanyama development

The outflow of Kwanyama to Angola in the late 1920s caused the SWA administration to step up their efforts to keep as many Kwanyama as possible in Namibia. Of particular concern was the drop in the supply of migrant labour which coincided with the large exodus of Kwanyama to Angola in response to the 1928 drought. In previous years about 50% of the labour supply came from the Kwanyama (Kreike 1994a). Henceforth, colonial officials encouraged Kwanyama people to 'colonise' the eastern parts along the Angolan border by opening up water. This process began in 1927 when settlements were established at Ondanda and Enana. Throughout the 1930s the settlement frontier moved gradually eastwards, more or less along the border line until it reached Oshishogolo and Olupale Munene in 1938.[27] At Omboloka, *c.*130 km east of Oshikango, it was said that:

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[24] NAO Vol.10 5/7/1 Assistant Native Commissioner Oshikango to Native Commissioner, Ondnagua, 10.7.1942, p.1.

[25] Kwanyama headman Jikuma, quoted in Kreike (1994a: 34).

[26] NAO Vol.10 5/7/1 Assistant Native Commissioner Oshikango to Native Commissioner, Ondnagua, 10.7.1942, p.1.

[27] *Ibid*, p.2.

> 'The quality of the water and the fertility of the soil is such that many natives are being attracted. Most of the cattle which the natives had perforce to send to Angola during the dry season are now concentrated at and near Omboloka ... the inhabited area of five years ago is in danger of becoming overpopulated ... The influx of natives has increased tremendously during recent years and if the inhabited area is not extended the position will soon be reached where the country cannot adequately feed the population.'[28]

Possibilities for extension further east along the Angolan border soon diminished due to the problems experienced in finding water. In the early 1940s efforts to obtain water proved 'an uneconomical proposition.' Distances from other settlements became too large, and water too deep. Very often the water table was more than 30 m deep, making digging wells in the sandy dune country difficult and dangerous.[29] The *Annual Report* for 1943 expressed the opinion that:

> 'Unless more suitable territory can be found in the Eastern Ukuanyama the Administration will have to consider other means of providing grazing lands for the stock of the natives. This stock now has to be grazed in Portuguese territory. It is felt that unless something can be done to meet the requirements of the many owners in this respect, many of them will be forced to trek across the border to settle in Angola.'[30]

Attempts were made, therefore, to explore the country south and south-east of Omshilonga, 'to ascertain the possibility of starting cattle posts in that part of the country.'[31] In terms of a new border demarcation between Kwanyama and Ndonga tribal areas agreed to in 1939, the land targeted for exploration and development south-east of Omshilonga was now considered to belong to the Kwanyama. In 1941 a meeting attended by several native commissioners from the north decided that the eastern boundary of the Kwanyamas should be extended to a line running roughly from north to south along 18°E and down to the Omaheke Omuramba. Bounded in the west by Ndonga territory, the area north of the Omuramba and west of this line was henceforth to be Kwanyama territory.[32]

The grazing found in the area of Omboto and Shau 'compare[d] favourably with the Oshimpolo Veld in Angola. As a matter of fact it is a continuation of the Oshimpolo Veld and has most of the fruit trees that grow there.'[33] While places such as Shau, Ongodi, Shanika and Omboto had hardly any standing water, 'in many places water is found only a few feet from the surface. Small waterholes dug by Bushmen, only three to four feet deep, with a good supply of water, were seen at Shau, Okayoka, Kroma, Oshimbungu, Shanika and

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[28] A 450 Vol.7 2/18 *Annual Report 1937*, 22.12.1937, pp.7–8.

[29] A 450 Vol.7 2/18 *Annual Report 1943*, 20.12.1943, p.6.

[30] *Ibid.*

[31] NAO Vol.7 2/18 *Annual Report 1940*, 3.1.1941, p.17.

[32] NAO Vol.10 5/7/1 Note of conclusions and decisions reached at a discussion on 14.7.1941 relative to suggested extension of Ukuanyama area to the Okavango River, p.1.

[33] *Ibid.*

Omboto.'[34] However, by the 1940s prospects for adequate water supplies in places such as Omboto and Onamisu still did not look promising. The Assistant Native Commissioner summarised the situation as follows:

> **Omboto** — 'Now three waterholes at this centre. Area where sand waterholes can be dug at this centre is, however, very limited. Supply of water fair.'
>
> **Onamisu**—'Waterholes were sunk at this centre which is apparently 20–30 km east of Otsholo, but without success.'[35]

As was mentioned previously, the Ndonga King laid vague claims to the land south of the Angola–SWA border. The *Annual Report* for 1937 stated that although Chief Martin was addressed on several occasions by officials on the issue of Ndonga land rights in the east, he 'has so far failed to give a definite expression of his claims.'[36] For as long as no developments had taken place on that land, Chief Martin 'had agreed to wave any claim to the Eastern Ukuanyama bush along the Border, in order to enable the Ukuanyama to extend to the Okavango.' However:

> 'when he realised that the Ukuanyamas were actually moving east, and starting settlements in the bush, which he and his tribe had claimed as hunting grounds, he began to raise objections and make things as difficult as possible, especially as regards water rights and for a time managed to actually hamper developments.'[37]

Some Ndonga headmen resented Chief Martin's cession of land for Kwanyama expansion, particularly since water had been found and new grazing opened up. The Annual Report for 1941 commented that:

> 'in a country where one of the greatest difficulties is the finding of water for stock, it can be readily understood that contesting parties press their claims to the utmost limits.'[38]

The response of the colonial administration to these border disputes was to negotiate and demarcate a boundary between the Ndonga and Kwanyama in 1939. In a sense this provided some protection against the further encroachment on Ndonga land, particularly by Kwanyama farmers.

The independence of Angola and the outbreak of war in that country in 1974 generated new pressures on available land in Ovamboland. Informants stated that Kwanyama people in southern Angola gathered cattle from Portuguese farmers and sold these cheaply to local

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[34] *Ibid*, p.18.

[35] NAO Vol.10 5/7/1 Assistant Native Commissioner, Oshikango to Native Commissioner, Ondangua, 8.11.1942, p.2.

[36] A 450 Vol.7 2/18 *Annual Report 1937*, 22.12.1937, p.2.

[37] NAO Vol.10 5/7/1 Assistant Native Commissioner, Oshikango to Native Commissioner, Ondangua, 8.11.1942, p.2.

[38] A 450 Vol.7 2/18 *Annual Report 1941*, 14.1.1942, p.6.

people, bringing about a major influx of livestock and adding pressure on cattle posts in the east and south east. Angolan independence also enabled the Peoples Liberation Army of Namibia to open up a front in Angola, shifting the main theatre of the liberation war into northern Namibia and southern Angola. In time, many people living along the border were displaced, particularly as a result of the establishment of a 10 km wide 'no-man's-land' zone. Those people who were displaced and refused to settle in the sprawling squatter settlements around Oshikati, Ongwediwa and Ondangwa sought refuge in the eastern and south-eastern parts of Oshikoto.

The Ndonga King gave permission for these people to settle in his area and make fields. One informant stated it was an old tradition among the Ndonga traditional authority to provide refuge to people from other areas. However, the King's generosity reinforced the earlier concerns of many that the Kwanyama were going to take over Ndonga territory. In order to prevent the perceived take-over, the Ndonga traditional authority encouraged its subjects not only to develop land in the east, but also to fence it.

3.5 Modernising agriculture: the Odendaal Commission

The fear that increasing settlement in the east by the Kwanyama was resulting in the Ndonga losing their land was compounded by another, unrelated set of developments in the 1970s and 1980s – for it was during this period that the colonial government began to implement policies to promote agricultural development through a process of 'modernisation.'

In the 1960s, the South African colonial regime embarked on limited reforms in the reserves of the country. These efforts coincided with the first stirring of national resistance against continued South African rule in SWA. The first nationalist movement, the South West Africa National Union, SWANU came into existence in 1957, followed by the establishment of the South West Africa Peoples Organisation, SWAPO. With these developments, the South African colonial state was faced for the first time with 'organised mass resistance to its political domination' (Innes 1980: 576). It responded to this challenge in two ways. First, it sought to smash any nationalist organisation through increased physical repression. Second, and more importantly to the discussion here, it set out to split Namibia up into a number of separate, tribally demarcated Bantustans (Innes 1980). To achieve the latter objective, certain political and economic reforms had to be initiated. In 1962 the South African state set up the *Commission of Enquiry into South West Africa Affairs* under the chairmanship of FH Odendaal.[39] It was required to come up with 'recommendations on a comprehensive five year plan for the accelerated development of the various non-White groups of SWA and

> 'to ascertain how further provisions should be made ... for their social and economic advancement, ... proper agricultural, industrial and mining

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[39] Republic of South Africa, *Report of the Commission of Enquiry into South West Africa Affairs 1962–1963*, RP 12/1964. This commission is commonly referred to as the 'Odendaal Commission' after its chairman.

development in respect of their territories and for the best form of participation by the Natives in the administration and management of their own interests.'[40]

The Commission argued that the first aim of economic development, namely the establishment 'of a modern economy in the Southern Sector by the White group' and concomitant 'selective transformation' of the 'traditional socio-cultural background' of indigenous communities had been achieved in SWA. It saw SWA on the verge of a second phase of economic development, 'namely where non-White groups have increasingly to be given the opportunity, necessary assistance and encouragement to find an outlet for their new experience and capabilities.'[41] The Commission characterised this process as the transition from a subsistence economy to a money economy, where 'the traditional system of supplying their own needs and of self-support was gradually supplanted by a *money system* peculiar to the system of the Whites.'[42] Future development programmes in Namibia had to build on these tendencies by 'consolidat[ing], expand[ing] and convert[ing]' existing reserves into homelands 'in which groups concerned could develop their own viable economy.'[43] Economic activities had to be brought to the reserve areas through a 'broad programme of capital expenditure' in which 'the various population groups can participate' without 'disrupting their existing strong traditional family and homeland ties.'[44]

Amongst other things, the Commission made some recommendations for the modernisation of agriculture in Ovamboland. More specifically, it

> 'consider[ed] the development of animal husbandry in all its branches to be vitally important to the inhabitants of these areas. In this development the efficient marketing of livestock and of meat is a decisive factor ... '[45]

It recommended the establishment of a special trust of livestock producers, whose responsibilities would include, *inter alia*:

> 'improv[ing] animal husbandry in Ovamboland in order to make it more remunerative for producers ... Success could be ensured by giving advice on more efficient breeding and marketing methods.'[46]

As far as the Commission was concerned, the improvement of livestock husbandry was primarily a matter of improving animal health and the quality of breeding stock. It did not discuss customary forms of land tenure and range management and how these might have affected animal husbandry, except to say that the proposed trust should be given land on a

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[40] *Ibid*, p.3.

[41] *Ibid*, para. 1437, p.429.

[42] *Ibid*, para 1429, p.425.

[43] *Ibid*, para 1437, p.429.

[44] *Ibid*, paras. v (d) and (f) p.333 as quoted in Innes, 'South African Imperialism', p.577

[45] *Ibid*, p.277.

[46] *Ibid*.

long term lease basis in order to establish quarantine farms for the fattening of livestock and subsequent marketing south of the veterinary fence.

With regard to land ownership, the Odendaal Commission expressed the opinion that among indigenous Namibian communities 'the interests of the group ... still largely prevail', rather than private land ownership.[47] It did not put forward any major recommendations on land matters, except to propose that future homeland governments should take over and manage land tenure, and it did not specify in detail how this task should be accomplished (Pankhurst 1996). In the case of former Ovamboland, all land within its boundaries was to be transferred to the new Legislative Council 'in trust for the population:'

> 'Provided that the Legislative Council may, with the permission of the State President of the Republic of South Africa, release certain parts of the land added to Ovamboland for alienation to individual citizens, and further that the Executive Committee or a citizen shall not have the right to alienate any land to a non-citizen [*i.e. non-Ovambo*] except with the approval of both the Legislative Council and the State President of the Republic of South Africa.'[48]

The right to alienate land thus referred only to the 1.4 m ha of land which the Commission had recommended be added to Ovamboland. This area comprised a small portion of the Etosha Game Reserve, approximately a million hectares of land in the district of Okavango and 247,000 ha of government land in the south-east.[49]

3.6 The Five Year Development Plan

The Odendaal Commission has been described as 'much more an intervention into *politics* than agricultural production *per se*...' (Pankhurst 1996: 418). It was left to the *Five Year Plan for the Development of the Native Areas*, which was drawn up in the mid-1960s (and on the basis of the recommendations of the Odendaal Commission) to recommend specific interventions for improving agricultural production in the former reserve areas. It operated on the premise that 'agricultural planning must ... pave the way in converting an existing subsistence economy to an exchange economy.'[50] The basis for 'scientific agricultural planning' hinged on two main elements:

> — The sub-division of reserves into agro-ecological zones in order to capture the ecological characteristics of each area; and

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[47] Republic of South Africa, *Report of the Commission of Enquiry into South West Africa Affairs*, para. 1421, p.425.

[48] *Ibid*, para. 310, p.85.

[49] *Ibid*, para. 300, p.83.

[50] SWA [1966] *A Five Year Plan for the Development of the Native Areas*, Windhoek, p.94.

— An 'assessment of the carrying capacity of the grazing and the determination of the size of economic farming units' in order to estimate the 'ultimate human carrying capacity for the region to be planned.'[51]

In conjunction with 'scientific agricultural planning' the Five Year Plan also proposed the establishment of training and research projects to support the process of 'modernising' agriculture in Ovamboland. It identified fields for agricultural research to support the five year development programme. These included grazing systems for saline soils; improvement of sanga cattle, sheep and goat breeds; and livestock management practices with special reference to diseases and parasites.[52] Proposed developments in the livestock sector concentrated on the improvement of herd quality and livestock disease control, particularly the eradication of lung sickness (*pleuro pneumonia contagiosa bovum*). Quarantine facilities with appropriate paddocks were to be established over the next five year period in order to facilitate livestock marketing to the south.

Despite the fact that much of the Five Year Plan was geared towards the modernisation of agriculture in Ovamboland and thus the transition form subsistence to commercial farming, it completely ignored any issues of transforming the customary land tenure system towards more individualised land tenure. This is particularly interesting in view of the fact that 'a large scale fencing programme' was proposed for former Hereroland. Here, argued the Five Year Plan, 'proper pasture rotation' was 'a prerequisite for optimal utilisation of available resources' and could only be achieved through enclosure.

'With the erection of fences, grazing camps can be given the necessary rest periods during certain times of the year and thus offer more abundant and better grazing to animals.'[53]

It is unclear why similar recommendations were not made for Ovamboland.

3.7 The Ovambo Legislative Council and enclosures

The recommendations of the Odendaal Commission were explained at tribal meetings and some traditional leaders subsequently requested that the South African Government establish a Legislative Council for Ovamboland. This was done in 1968 (Tötemeyer 1978). Thus the beginnings of rangeland enclosure in Oshikoto coincided roughly with the establishment of a regional, ethnically based form of government in 1968.

The issue of enclosure surfaced in the Legislative Council soon after its establishment. During its Third Session in early 1970, a lively debate ensued concerning the pros and cons of fencing off communal grazing areas into camps. Those in favour of fencing felt that the establishment of camps was the only way in which grazing could be permanently improved. In addition, fenced camps would provide an important management tool to either substitute for the decline in the number of herd boys resulting from increased school attendance, or to

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[51] *Ibid*, p.95.

[52] *Ibid*, p.102.

[53] *Ibid*, p.163.

enable those still herding cattle to attend school.[54] The shortage of labour for herding and the simultaneous absence of fences increased the problem of stray cattle.[55] Protagonists of fenced camps also argued that these would greatly facilitate the breeding of cattle.

Members who opposed these proposals did so largely on technical rather than on equitable grounds. In particular they feared that enclosures would eventually lead to a depletion of soil fertility, as taking cattle away to distant camps would deprive farmland of manure. In addition, milking would take place far away from homesteads. One of the opponents of fencing concluded that if the Legislative Council were to agree to the proposal, they would be getting a hiding outside, saying 'if we approve this planning, it will bring about unrest, today.'[56]

During the debate the issue of ownership of fenced camps was also raised. The view was expressed by Councillor Cornelius Njoba, in later years to become the Deputy President of the Democratic Turnhalle Alliance (DTA) and leader of the Second Tier Authority of the Ovambos, that the customary form of land tenure was no longer appropriate for the level of development attained in Ovamboland. He argued that as the people were developing in such areas as education, government and the church, there was a desire by the people to develop the land and change customary forms of land tenure. Because a man could not pass on land to his widow and children under customary laws, there was little incentive to bring about permanent improvements. Similarly, the customary process of land allocation was not always honest and just. For all these reasons, improvements in customary forms of land tenure were called for.

The debate around the fencing of communal land was conducted against a background of increasing social differentiation. The First Legislative Council was composed of traditional leaders and a small, but growing elite of clergy, farmers and traders. The latter increased their representation in the Second Legislative Council which came into being after 1973. Traders were generally conservative, but enjoyed considerable status and influence on account of 'the possession of cash to which more value is probably attached than to mere ownership of land and cattle.'[57] While the 'modernising elite' may have been rather small in number, they were able to use the Legislative Council to articulate their views on such matters as agricultural and economic development in the region. What most members of this group shared, was a perception that Ovambo farmers could no longer earn enough from agriculture alone – 85% of people interviewed in the early 1970s ascribed this to the fact that 'too many people were farming in Ovamboland' (Tötemeyer 1978: 143).

The general solution to this problem was widely regarded to lie in the modernisation of agriculture: 70% of respondents in the survey referred to above were of the opinion that

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[54] RSA 1970. *Veratimverslag van die Ovamvolandse Wetgewende Raad. Derde Sessie, Eertse Wetgewende Raad, 16.3.1970–25.3.1970*, p.39.

[55] During the same session a Select Committee tabled a short report dealing with stray animals. It recommended that a number of fenced camps be established in every tribal area to accommodate stray animals until they were claimed by their owners. *Ibid*, p.53.

[56] *Ibid*, pp.38–39.

[57] *Ibid*, p.69.

yields could be improved by improving farming methods. Central to this process was to be the transformation of customary land allocation and control. Certain sectors of the population, particularly the educated and traders, rejected 'the communal system of land ownership and the dominant role played by the headmen and chiefs in allocating land ...' These feelings resulted in a 'fervent desire for permanent private land ownership.' On the other hand, 80% of traditional leaders interviewed opposed the proposals that land should be removed from the control of headmen.

With the desire for change within customary land tenure came the realisation that such changes would be meaningless unless the matriarchal inheritance system was also altered. Of particular concern was the fact that when the head of a family died, the matrilineal relatives were the heirs, rather than the dead person's family. While more than 90% of teachers, religious leaders, civil servants and nurses thought that the matrilineal inheritance system should be changed, only 38% of traditional leaders were similarly inclined (Tötemeyer 1978: 145–6).

3.8 The Select Committee on Land Tenure and Utilisation

The land tenure issue was referred to a Select Committee on Land Tenure and Utilisation by the Legislative Council, 'to sound out the feelings of every tribe on the old system of land ownership, and on the most suitable new system for the future development of Ovamboland' (Tötemeyer 1978: 77). In view of the tension between the 'old and new', the Select Committee steered clear of any radical proposals. As a result, it did not recommend any changes to the ownership of land at household level and proposed that the system of lifelong usufruct to arable land be retained. In a curious twist, however, the Committee recommended that the ultimate ownership of land be transferred to the Ovambo Government and 'that the monies owing no longer went to the traditional leader but via the tribal fund to the Ovamboland Government.' In addition it recommended that 'sub-headmen should no longer pay for their respective districts and wards, while for their subjects a fixed though reasonable price for land was recommended, which was to be the same everywhere in Ovamboland.' Further, traditional leaders should be compensated for the loss of income from land 'sales' by receiving a stipend from the tribal fund (Tötemeyer 1978: 78).

The Select Committee on Land Tenure and Utilisation reflected the view of the more traditional sectors of Ovambo society. Thirty out of the eighty-three people invited for consultations consisted of 'reliable' sub-headmen, while another forty were considered to be 'reliable' also. It would appear as if the recommendations of the Select Committee sought to retain customary forms of access to land, while increasing the powers of traditional leaders through the newly created Ovambo Government.

3.9 Colonial officials and fencing

Demands by the modernising elite to improve agricultural production and transform customary land tenure coincided with proposals by the colonial government to embark on programmes to commercialise the northern economy in general and agriculture in particular. Fencing was to have an important place in these efforts. The Chief Agricultural Officer in

Ondangwa argued in 1969 that 'fencing and water will be needed to promote sound veld and stock management practices.'[58] A year later a sub-committee of the 'Planning and Co-ordinating Committee' submitted that:

> 'the present system of land ownership and utilisation had a limiting influence on the administration (extension) and production (lack of continuity) as economic asset (*sic*).[59]

Officials were generally agreed that serious attention needed to be paid to the transformation of the traditional system of land ownership of Ovamboland which should be settled on 'a healthy and economic basis.' At the same time, they were aware that such a development course would require considerable negotiation and persuasion of the population by the Executive Committee.[60]

The concepts of agricultural planning and, more specifically, farm planning, were introduced for the first time in Ovamboland in the late 1960s. This symbolised the new approach to agricultural development and 'modernisation' which followed in the wake of the Odendaal Commission and the development philosophy spelt out in the Five Year Development Plan. While agricultural planning was regarded as having to 'pave the way in converting an existing subsistence economy into an exchange economy',[61] farm planning was seen as taking care of pasture management. Anticipating that the Ovambo public would be very critical of 'farm planning', it was proposed to initiate these efforts in the more lightly settled areas in the west (Ukwaludhi and Ongandjera) and in the east (land added to former Ovamboland as a result of the recommendations of the Odendaal Commission). In time, the process was to be extended into more densely settled areas (planning targets of 200,000 ha a year between 1971 and 1974 were proposed).[62]

A report produced in 1971 on the future development of Ovamboland also recommended the introduction of *economic units* in Ovamboland. It determined the size of an economic unit to correspond to 100 large stock units or 400 small stock units.[63] This recommendation was approved by the Ovambo Cabinet and applied to farm planning.

The South African government appointed the Bantu Investment Corporation (BIC) to initiate and oversee economic development in Ovamboland. It was primarily concerned with commercial development and established a number of factories and businesses (Tötemeyer 1978: 151). It was also appointed as the sole agent for cattle marketing in Ovamboland and

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[58] OVA 49, 6/9/1 Hooflandboubeampte Ondangua: Insake vraelys, 25 June 1969, p.4.

[59] OVA, 49, 6/8/4/1 Vergadering van die Onderkomitee oor Dorpsbeplanning en ontwikkeling en Landbouontwikkeling van die Beplannings- en Koordinerende Komitee op Woensdag 2 September 1970, p.2.

[60] OVA, 49, 6/10/2-7(I) Die Sekretaris (no date, no title), p.13.

[61] SWA [1966] *A Five Year Plan for the Development of the Native Areas*, Windhoek, p.94.

[62] OVA, 45, 6/8/1-7(I) Direkteur: Landbou to BENBO, 4.5.1971, pp.1–2.

[63] See OVA 49, 6/10/2–7 (II), Sekretaris Departement van Landbou en Bosbou to Sekretaris van die Hoofminister, Ondangua, 2.7.1973, p.2.

Kaokoveld by the South African Department of Bantu Administration and Development in 1973. Since the marketing of cattle to the south of the country was not possible because of the veterinary cordon fence, an abattoir had to be built in Oshikati. In addition the BIC needed land to store unfinished and young animals, which represented 50–75% of the cattle on offer. To facilitate this, the Corporation obtained 104,000 ha of land in the Ndonga area between Etosha and the West Mangetti.[64] Much of this land had been allocated to white farmers for emergency grazing in the early 1970s. In February 1973, 11,200 cattle owned by about forty white farmers, mainly from the Tsumeb, Grootfontein and Outjo districts were grazed in the Ovambo Mangetti. With this number the limit had been reached, and no additional cattle were allowed in. Grazing fees of 20¢ per head per month were charged and contracts entered into on a first come first served basis.[65]

3.10 Enclosure as defence against land alienation

Land for the Mangetti Block was obtained by the BIC after consultations with the Ndonga Tribal Authority. It had agreed to the scheme, as it regarded the development of cattle marketing as important. It was not in favour, however, of fencing any more communal land and therefore opposed government plans to develop the area east and north-east of the quarantine farms into economic units. Government anticipated such development to extend east to the Kavango border and then all along that border in a northerly direction.

Suspicion of government plans was reinforced by perceptions that the BIC was fostering competition to local business people instead of supporting their development. It was thus feared that it and the government had colluded to take the land away from local people for the benefit of someone else. In an attempt to prevent this from happening, the Ndonga Tribal Authority gave permission and encouraged its own people to fence off land instead, although no statutory provisions existed which might have authorised it to do so. As such, the Traditional Authority established its own procedures in terms of which allocations for fencing were to be made. Interested parties had to approach the Senior Headman of the area to obtain his approval before the latter took the application to the King and his Council. The King would normally send someone to the land in question in order to ascertain its borders and exact location. Once this had been done, the Council assessed the application against a set of criteria. These included a requirement that the applicant had to be a Namibian citizen; that he/she was of good character, *i.e.* had no criminal record and was not utilising fenced land elsewhere.

Approval was given on a prescribed form, which had to be signed by the King, the Senior Headman of the area and the Secretary of the Tribal Authority. It confirmed that 'The King of Ondonga and his Council approved the ownership of this land by the above mentioned person' and reflected the name of the grazing area, the name of the recipient, name of the

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[64] OVA 51 16/17/1 Sekretaris Binnelandse Sake aan Sekretaris, Bantoe Administrasie en Ontwikkeling, pretoria, 13.9.1974, p.2.

[65] OVA 47 6/8/2/3-7 Vol.II Telex to Secretary: Bantu Administration and Development, Pretoria, 28.2.1973; D.J. Booysen to Direkteru: Gemeenskapssake, Ondangwa, 15.3.1973.

farm and date of occupation. A copy of this 'agreement' was kept by the Ondonga Tribal Authority. In late 1996, it had records of more than one hundred approved farms. The procedure also provided for the retroactive legalisation of farms that were fenced without prior authorisation by the King and his Council. At least one case was observed where authorisation was given for a farm first fenced and occupied in 1985. The emergence of these procedures indicates that the Tribal Authority was not opposed to fencing as such, but rather wanted to be in control of the process. The legality of fencing hinged on whether approval had been obtained from the Tribal Authority or not. While payments were not required for a fenced unit, it was customary to do so after approval had been granted. Payment in a sense transferred certain rights to the land to the applicant and legalised the process.

Although the certificate authorising the fencing of land refers to the ownership of the land, the rights of allottees are restricted. Since fencing is a relatively new phenomenon, rights to fenced units have not been formalised yet, and represent a mixture of traditional notions of non-alienability and more modern notions of private ownership. Several informants expressed the opinion that fenced land cannot be sold, although this is said to have occurred in some cases. In one or two cases where this happened, it was said that a price would was negotiated as compensation for the improvements on the farm. While not condoned by the King, headmen were said to turn a blind eye to land sales against payment of a small fee. In a few other cases, fenced units were subdivided and rented out to several farmers. Although the extent of this is not well known, the Tribal Authority is said to disapprove of this and intends to act against such practices. Fenced land can be passed on to an heir, however. Rights to a fenced unit lapse upon non-utilisation of the farm. In such instances it would revert back to the King for reallocation.

3.11 Independence and after

Although the Ndonga Tribal Authority seems to have managed to retain considerable control over the fencing of communal land, it must be assumed that unauthorised enclosures have occurred in the 1980s. It would appear also that Independence accelerated this process. A dramatic decrease in registration of fenced units in the office of the Ndonga Tribal Authority after Independence supports anecdotal evidence that the unauthorised enclosure of communal land has increased since 1990. This has been ascribed by informants to several reasons.

In the first place, the Namibian Constitution placed the ownership of all communal land in the hands of the state. For many people this was an indication that traditional leaders had no more authority over their land and thus no powers to restrict the fencing of land. Those who prescribed to such a narrow reading of the Constitution saw their views supported by Article 21 of the Constitution which provides that 'all persons shall have the right to ... reside and settle in any part of Namibia'. Many people therefore regarded it as their constitutional right to settle wherever there was space. The possible prohibition by a traditional authority do so was interpreted as an infringement of a fundamental constitutional right.

Most importantly, however, the absence of any constitutional recognition of customary land tenure rights in communal areas and a comprehensive land policy continues to leave communal area farmers and traditional authorities without any recourse to statutory law to defend their rights. At the time of writing, the functions and responsibilities of traditional

leaders with regard to communal land are not defined by law. Powerful political and economic interest groups have used this state of affairs to their advantage by ignoring customary land tenure rights in their bids to obtain what they believe to be a legitimate reward for their contribution to the struggle for independence: a fenced farm on communal land.

3.12 Conclusion

The enclosure of communal land in Namibia has frequently been ascribed to the gradual breakdown and dissolution of customary forms of land tenure. The evidence presented above does not support this argument altogether. Rather, it suggests that before independence, Ndonga traditional authorities sanctioned the enclosure of tribal land in an attempt to prevent the colonial government from alienating land through a government initiated fencing programme. The support given to the enclosure of communal land enabled the King and his Council to retain their powers to allocate land and thus remain in control of the process of communal land enclosure. This control was formalised by procedures which governed applications for fenced units, their approval and the registration of an allocation.

With a few exceptions, most of the fencing before independence seems to have been carried out with the approval of the Ndonga Tribal Authority. Since independence, the ability of the Ndonga Tribal Authority to remain in control of enclosures has decreased dramatically, with incidents of 'illegal fencing' increasing.

The reasons for these changes in the ability of the Ndonga Tribal Authority to control enclosures have to be sought in the changing balance of power in former SWA and Ovamboland. Three periods can be identified in this regard. During the first period ending in the late 1960s, the colonial government implemented a policy of indirect rule in Ovamboland, according to which traditional authorities were expected to administer customary matters, including land. During this period, statutory legislation did not encroach on customary law to allocate land, and traditional leaders generally administered tribal land according to customary laws.

The second period covering the late 1960s through to the 1980s was characterised by the introduction of self-government in Ovamboland. The establishment of an ethnically based regional government structure – first in the form of the Legislative Council and then as Representative Authority of the Ovambos – provided traditional authorities with certain statutory powers which bolstered their positions to some extent. At the same time, traditional authorities came under increasing pressure to change customary land tenure arrangements. On the one hand such pressures came from an emerging elite of teachers, nurses, the clergy and business people who regarded customary land tenure practices as inhibiting future socio-economic development. The colonial government, on the other hand, also sought to transform the traditional land tenure system in order to promote modern agricultural practices.

These challenges of customary land tenure developed amid increasing political polarisation. The independence of Angola had shifted the war of liberation right onto the borders of SWA. Both sides to the conflict – the liberation movement and the colonial government – were vying for the support of traditional leaders. The decision of the Ndonga Tribal Authority to

encourage the enclosure of communal land in its own tribal area must be situated within this wider political context.

The third period started at independence in 1990. It is during this period that traditional leaders gradually lost control over the process of communal range land enclosures. Representative authorities were dissolved and with them other aspects of tribal rule, such as the tribal police. Traditional leaders found themselves without any legal or institutional support. In addition, many people interpreted some constitutional provisions such the freedom to move and settle anywhere in the country quite literally. The new political elite did little to replace traditional authorities with other local and regional government structures, thus leaving an administrative vacuum which facilitated unauthorised fencing. Independence and subsequent political and administrative changes thus seem to have accelerated the disintegration of control over land allocation by traditional authorities, opening the way for the new elite to appropriate communal land for private use without authorisation from anybody. In a very profound sense, therefore, access to communal land for small scale herders became more limited rather than wider and more secure in independent Namibia.

4 AN ASSESSMENT OF FENCING ACTIVITY IN EASTERN OSHIKOTO

JONATHAN COX

4.1 Introduction

Despite the widespread exposure of the fencing issue in northern Namibia, few data exist with which we can judge adequately the extent of fencing and its implications in terms of land management. This section attempts to address this gap by providing an objective estimate of fencing distribution in north east Oshikoto – an area where enclosure is reportedly widespread. In essence this constitutes a follow up survey to the only previous attempt to map fences in the region — that carried out by Namibia's National Remote Sensing Centre (NRSC) in 1994. The NRSC survey was a rapid reconnaissance exercise covering the whole of Oshikoto Region, using a mixture of satellite image interpretation and flight verification of fence positions. The survey described here is a more intensive, field based survey encompassing a smaller field area (86 × 65 km). This section describes this exercise and assesses the results in the light of the NRSC survey.

Although there are many differences of detail between the two surveys, the pictures of fencing they present are broadly similar – and are also largely consistent with general descriptions of the pattern of enclosures found elsewhere. Perhaps most significantly, a comparison of the two fencing maps indicates that areas in the east of the field area, which represent a key resource for communal farmers, have been experiencing rapid fence development. This development, which at least in part appears driven by groundwater exploitation, has created a sharp dividing line between two antithetical forms of land use which were previously buffered by areas of unutilised or underutilised land. It is also undoubtedly squeezing the communal resource base, and this raises management questions which are addressed in the Section 5 of this report.

The paper also presents contextual data for the field area, combining ground survey data, air photographs (taken in August–September 1996), digital Landsat data and other secondary data. These data were used to create a variety of Geographic Information System (GIS) coverages for settlement, boreholes, land use, tracks and soils, which are discussed in relation to the distribution of enclosures. The treatment of spatial relationships here is exploratory rather than exhaustive, but the exercise does provide some clues as to the local factors which have helped determine the pattern of fencing in the area.

4.2 Materials and methods

Table 4.1 lists the four principal data sources used in the construction of the fencing maps and coverages for other features. These are listed in the order they were acquired, and are described below briefly. Methods of integrating these data in a GIS are also covered in this section.

Table 4.1 Data sources used to map various ground features

Data Source	Feature	
NRSC data (1:150,000)	Fences (1994) Boreholes*	
GPS survey	Settlement Boreholes Alluvium/pans **	Fields ** Fences Tracks (**)
Landsat TM data (30 m resolution)	Soil type	
Air photographs (1:80,000)	Tracks/fences † Fields	Pans Cattle trails

* The NRSC obtained borehole coordinates from DWA and private drilling contractors (see §4.3.2)
** These observations were used as ground truth information in conjunction with both Landsat and air photograph data
† Linear features with high reflectance were assumed to represent tracks and/or fences (see §4.3.2)

4.2.1 NRSC data

The NRSC data relate to the fencing map produced by Holme and Kooiman in 1994. The data include fencing estimates and secondary data for borehole locations, schools and settlements. The NRSC map of fence positions was instrumental in selecting the initial field site boundary, the primary aim of which was to choose a representative area which included a range of land uses and resource pressure (incorporating both enclosed and unenclosed land). After consultation with project members, the extent of the area selected was 17.027°E to 17.891°E and 17.836°S to 18.381°S (85 × 66 km). The NRSC fencing map also provided the prime means of orientation during the fieldwork stage, with available maps at 1:50,000 and 1:250,000 scales proving unreliable in terms of settlement and track positions. Although the fencing estimates themselves were not always consistent with evidence on the ground (see section 4.3.3), the fencing map, being based largely on an interpretation of linear features, was an excellent guide to the positions of cut-lines and tracks, and was therefore ideal for navigation. The fencing map itself is discussed later in section 4.3.1. In this instance the positions of fences (verified and unverified) and boreholes were digitised from the hard copy map, although the NRSC subsequently provided the original digital data.

4.2.2 Field survey

In view of the large potential sources of error associated with attempts to map land use patterns remotely, it was decided that a reliable estimate of fencing activity could best be obtained through a ground survey – which in this case involved mapping fences using a Global Positioning System (GPS) and covering the ground in a 4×4 vehicle. Unfortunately air photographs of the field area were not available during the main fieldwork phase, although they did become available subsequently (see below). As such the survey was carried out relatively 'blind', and with an absence of detailed locational material the emphasis

was on trying to achieve as complete and even a coverage as possible by ensuring that all accessible areas were visited. This itself did not ensure universal coverage, however – the field area is very remote and the existing network of tracks and cut-lines is sparse in many areas (see below). In addition it is inadvisable to leave the tracks, even where this is possible, as the area was extensively mined during the independence struggle.

The distribution of GPS waypoints from the ground survey is shown in Figure 4.1. The waypoints are from three separate tranches of fieldwork and represent a mixture of mapping features, including fence positions (most common), settlement, boreholes and ground truth points for subsequent analysis of satellite imagery. Figure 4.1 also shows as black lines linear features that were detectable from air photograph interpretation (API) (see section 4.2.4). These in the main represent tracks, although this was not always the case, and in many cases what appeared to be tracks were unsuitable for vehicles (in particular in the south central part of the field area). However, given that most 'potential' tracks show up as linear features, the pattern of arcs in Figure 4.1 does illustrate how large portions of the field area were inaccessible by vehicle. Clearly the reliability of fencing estimates in these areas is unknown, and this is major drawback to the ground survey approach.[66] Errors may also occur where linear features, which may be present in the field, are not identified from API (the pattern of arcs in Figure 4.1, which includes lines that seemingly end in the middle of nowhere, suggests that this may be the case for some parts of the study area). This is particularly a problem in sandy areas, where it is often impossible to separate the light tones of tracks from the high reflectance soil background. To compound this still further, unknown errors in fencing estimates will occur where fences along the survey route are present but not sighted. In many parts of the field area, the natural vegetation is thick and woody and fences are easily camouflaged, making errors of fence omission a real possibility. This problem is not exclusive to ground surveys, however, and Holme and Kooiman encountered similar problems from the air.

An additional potential source of error in the ground survey comes from the GPS readings themselves. Commercially available GPS, which make use of civilian signals, are inherently inaccurate. Combined, satellite clock error, ephemeris error and atmospheric/ionospheric distortion typically produce positional errors in the range of 3–10 m, but this inaccuracy can be compounded if the configuration of satellites at the time of observation is sub-optimal – as indicated by high 'DPOP' readings. Under typical DPOPs, the expected location error would be in the range 10–30 m, but in poor conditions it may well be 100 m or more. In the present case all DPOP figures recorded were very low (1–2), so we can be reasonably confident that GPS waypoints presented here are generally within 30 m of their true location. Given the magnitude of other errors in the geo-referencing process within GIS and remote sensing (see for example section 4.3.3), these errors were not considered significant.

The primary purpose of the ground survey was to obtain reliable data for fence positions. Other features, including borehole positions and settlements, were mapped as they were encountered, but these features were not mapped exhaustively – rather the positions that were taken were used to check the reliability of other data sources. In particular, the waypoints for

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[66] Although Holme and Kooiman's aerial survey also suffered from incomplete observational coverage, as is evident from Figure 4.2 later in this section.

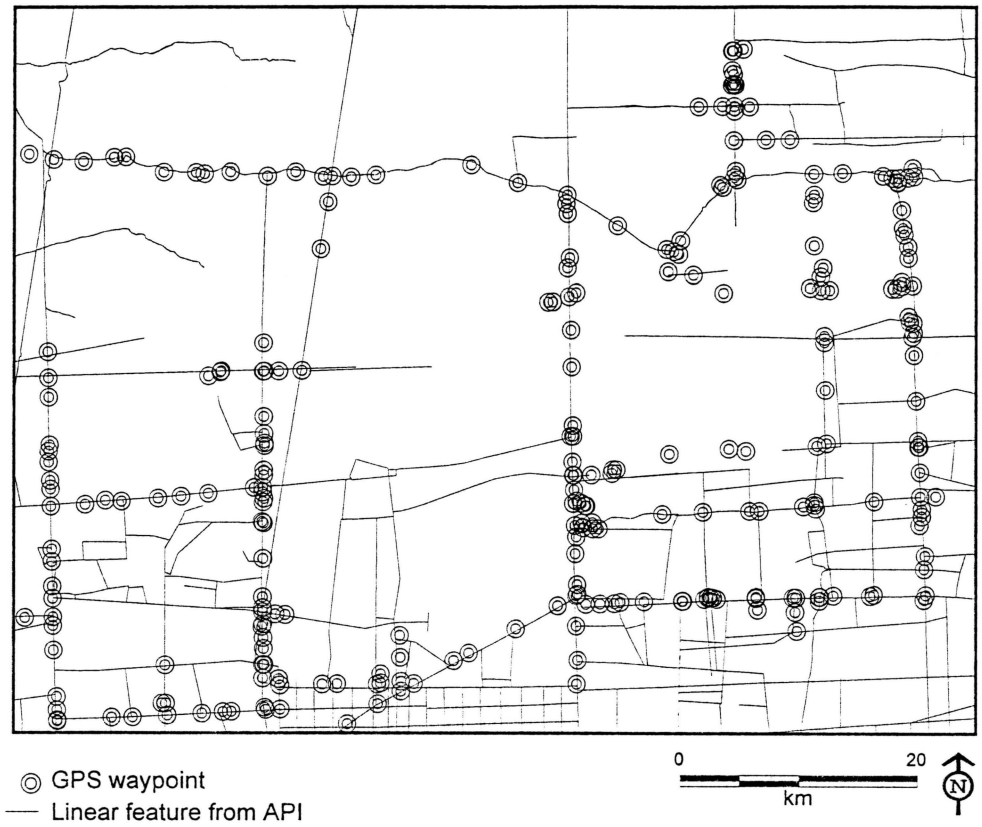


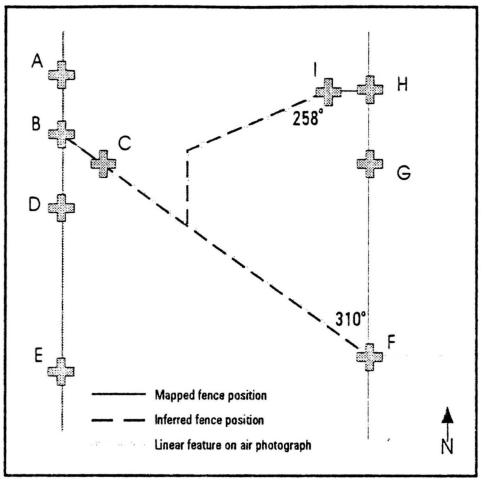
Figure 4.1 Distribution of waypoints from field survey, with linear features from air photograph interpretation

boreholes was used to validate the NRSC map data for borehole locations (see section 4.3.2), while the positions of fields, tracks and individual soils types were used to aid the interpretation of air photographs and satellite imagery. These data were incorporated as separate point GIS coverages and were overlayed with vector coverages (NRSC boreholes, fields) and raster coverages (satellite imagery) at the next stage of analysis.

The production of the vector coverage for fence positions was more involved and required interpretation on the basis of field evidence and information from API. Although initially extending to all fences encountered in the field area, the analysis in this report is limited to wire and pole fences (*ondalate*), and for reasons of scale and visualisation does not include bush fences around homesteads and agricultural land. Fence locations were derived from a mixture of direct observations ('hits' in the field), as well as the interpolation between hits. A point GIS coverage of waypoint positions was displayed along with waypoint IDs and overlayed with the geo-referenced coverage of linear features from API referred to previously. Interpolation between hits was then carried out either on the basis of field notes (including description of fence positions and bearings taken in the field), or using the coverage of linear features, or a combination of both. This process, which is probably best illustrated using an example, is described in Box 4.1. The final coverage is presented and discussed in section 4.3.2.

Box 4.1 Survey techniques for fencing map

For reasons outlined in the main text, the fence map presented in this section of the report was produced using a mixture of ground survey and air photo interpretation (API). To describe more accurately the techniques used, and to give a better impression of the sorts of errors that may be encountered, a 'hypothetical' mapping scenario using current methods is detailed here.



This method is illustrated schematically in the diagram above in which crosses indicate positions where GPS positions (waypoints) have been taken. The survey in this case starts at point A, where a fence (indicated by the solid black line in this case) has been recorded. The surveyor then follows a N–S route (say along a cut-line) until he reaches point B, where he sees a fence heading roughly SE. As there is no track he follows this fence for several hundred metres on foot and takes a GPS reading at point C before returning to B. Continuing south waypoints are taken at fairly regular intervals (D,E) and the presence of fences recorded.

Later, the survey progresses north along a parallel cut line. At F a GPS position is taken where a dividing fence apparently runs NW. The bush is too thick to walk at this point, so a bearing for the fence is taken instead. Continuing N along the cut line via G, another fence heading roughly W is noted and a position for the fence junction recorded. This time the surveyor walks to a position where the fence changes direction, and takes a GPS position and a bearing at this point.

After the completion of the ground survey, GPS positions are incorporated into a GIS coverage, and overlaid on a separate (geo-referenced) coverage showing linear features detected by API (and shown here as thick grey lines). These features are then used to interpolate between known fence positions. In some cases this a simple extension along recorded bearings (such as interpolating between B and F). In other cases the information from API suggests a fence pattern not apparent from the ground survey (such as the fence line between I and the fence line B–F). In other cases the presence of a linear feature from API does not necessarily signify the presence of a fence, and this may be confirmed or not by field notes (*e.g.* the notes for F may record a track running W–E with no associated fences). In addition, in this case, the fence running between F and H has not been picked up through API.

4.2.3 Digital Landsat data

In semi-arid areas, soil type is often a key factor in determining land quality and carrying capacity. Moreover there are often very clear boundaries between soil types, making their spatial distinction relatively straightforward. The spectral response of soils, being a product of their physical and chemical properties, may also vary widely, and this is the basis for using multi-spectral satellite data to produce distribution maps for soils (*e.g.* Coleman *et al.* 1993). In the current case, the lack of secondary soil maps and analytical data for eastern Oshikoto and the limited amount of time available for the collection of primary soil data made this approach particularly valid.

Two archive TM scenes were obtained from the US Geological Survey EROS Data Center in South Dakota. The scenes were taken on 30 July 1986 and are cloud free. TM images cover a ground area of 185 km × 185 km, with a nominal ground resolution of 30 m in all bands except band 6 (thermal IR). Preprocessing of the TM data was carried out to rectify geometric and radiometric errors in the raw image data. Geometric errors were rectified by warping a 100 × 80 km subscene of the image to ground control points (GCPs) that could be detected in the scene, and whose absolute position on the ground was known. GCPs used for the present image were mainly road/track junctions (many of which were outside the field area), and their positions were recorded using a GPS, as described above. The RMS error was 108 m, or 3.58 pixel widths.[67] After rectification, images were resampled using the nearest neighbour algorithm. Internal radiometric correction and subsequent image processing was carried out using IDRISI software. The lack of quantitative soil data for the field area precluded any direct regression analysis between soil properties and individual bands/band-to-band ratios. Instead it was decided that standard classification techniques would be more applicable. Classification involves assigning class labels to individual pixels according to a partition of the image feature space, based on the statistical (spectral) characteristics of pixel groups. In this case both supervised and unsupervised classification approaches were explored, although successful results were could only be obtained from the former. For this we used the maximum likelihood classifier (for more information on these and other remote sensing terms see Mather (1987), Lillesand and Keifer (1990) and others). The results of this classification are discussed in section 4.3.5.

4.2.4 Air photograph interpretation (API)

In January 1997, air photographs for the field area were obtained from the Department of Survey and Lands in Windhoek. The photographs are 1:80,000 scale and were taken in July and August 1996. API provided the following information:

— *Field boundaries* were clearly visible from the air photographs (see Figure 4.2) and were traced and digitised manually from each plate. The digitised cover for each photograph was warped using detectable features such as tracks

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[67] RMS is the root mean square error or tic/GCP registration error, and represents the error between the original and new coordinates. The RMS error in this case is relatively high because the number of GCPs that could be detected in the subscene (10) was low. This is a common problem in relatively featureless, remote areas such as eastern Oshikoto.

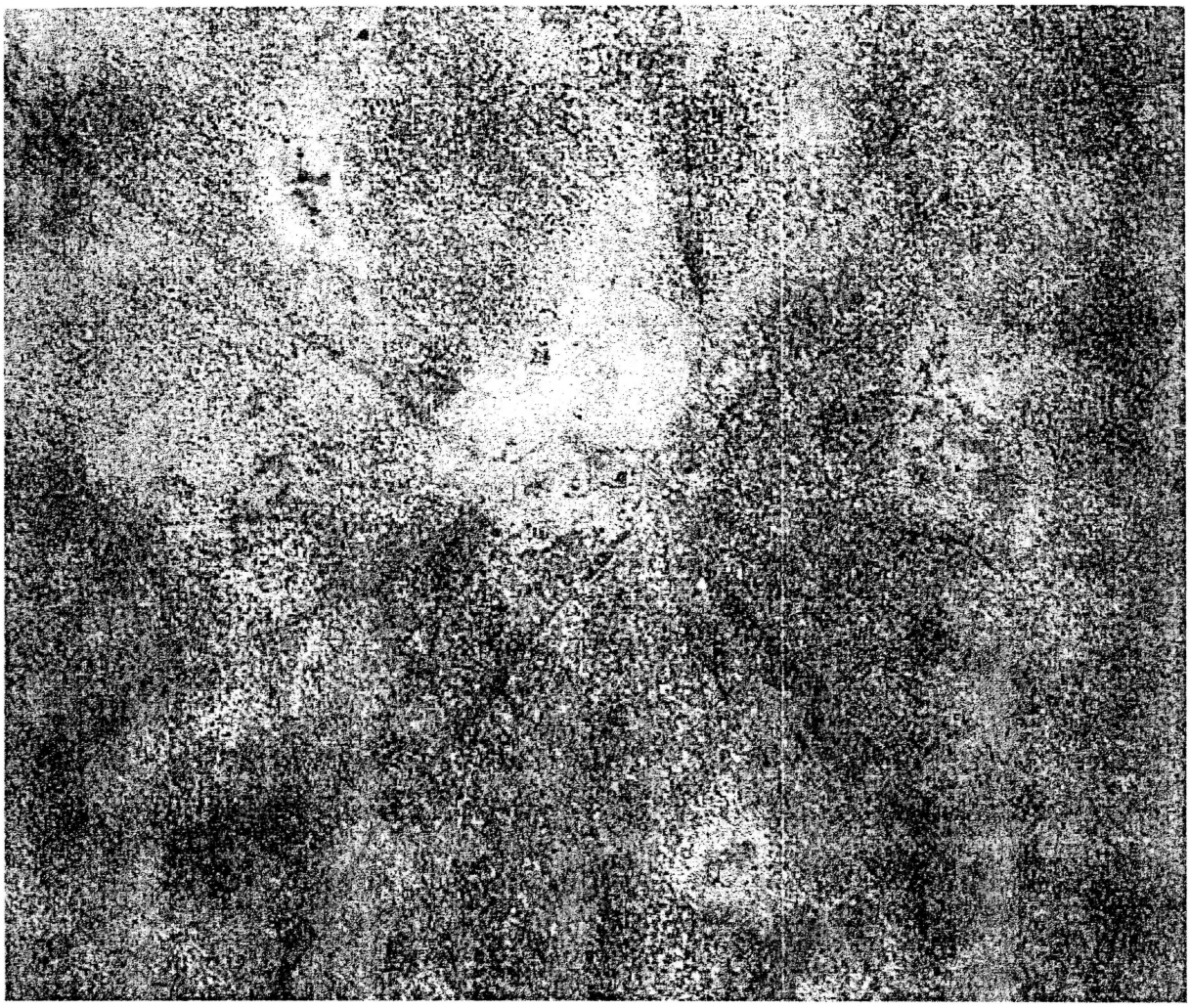

Figure 4.2 Extract from air photograph showing settlement, fields and animal trails

as ground control points. After editing in ARCEDIT, the individual field coverages were combined into single coverages for each study area using the *union* utility in ARC/INFO

— Cattle *trails* were evident as low reflectance streaks on the air photographs (as illustrated in Figure 4.2). Because air photographs were obtained after the main fieldwork phase, it was not possible to verify the cause of these dark tones, although it is likely that nutrient enrichment in areas of animal concentration may lead to more mature vegetation being present.

— Tracks and cut-lines were identified, traced and digitised from individual plates. These show up as linear features of relatively high reflectance (light tone), but may be difficult to discern in areas of dense vegetation or bare soils.

4.3 Results

Following the procedures set out in the materials and methods section, a set of geo-referenced GIS coverages in both vector and raster format were produced for a range of ground features,

including fence positions (1994 and 1997), boreholes, fields, settlement and soils. The following sections describe and discuss these results and explore possible associations between separate GIS coverages.

4.3.1 Fencing in 1994: the NRSC fencing map

As has been noted previously, the fencing map produced by the NRSC in 1994 (Holme and Kooiman 1994), is the only previous estimate of the extent of enclosures available. The map covers the whole of Oshikoto Region at reconnaissance scale (1:150,000), and so incorporates the current field area. The NRSC project was considered a pilot study, the aim of which was to investigate the 'possibilities and constraints' in using remote sensing and GIS tools to evaluate fencing, as much as to produce a representative fencing map for the Region. This caveat should be borne in mind when assessing the accuracy of the resultant map. In later sections the NRSC findings are compared to results from the current project and it is worth stressing here that Holme and Kooiman's approach was quite different to that pursued here. Holme and Kooiman's map is based primarily on a coverage of linear features as derived from hard copy false colour composites of SPOT and TM data[68] for 1992. From this they identified areas for low flight verification. These areas were then overflown and fence positions were validated using a combination of video and still photography. After gaps in this coverage had been identified, another overflight of the area was carried out – and this time the position of fences was recorded using the aircraft's own GPS system. The newly updated coverage was then projected onto the original digital satellite data, which were enhanced to allow more definitive location of fence positions.

The NRSC fencing map for the current field area is shown in Figure 4.3. In this the solid red lines indicate 'verified' fence positions, while the dashed red lines are 'unverified' positions. Verified fences are linear features from satellite imagery which coincide with fence observations from low flight passes. Unverified fences are those linear features which were not recorded during overflights. Figure 4.3 also shows in yellow the path of NRSC overflights for the area, which can be used to assess qualitatively the relative reliability of fencing estimates depending on the proximity to the flight path or otherwise (see Section 4.3.3). In this case fences for the Mangetti Block (extreme south central of the field area) have been included as verified fences, and are not differentiated from other fences. Holme and Kooiman obtained data for these fences from Noting Plans (1:100,000) of the Deeds Office under the Surveyor General (updated). The settlement/borehole names included here relate to GPS waypoints from our own field work.

Figure 4.3 shows that most of the fencing activity has been concentrated in the south of the field area, and particularly the area surrounding the Mangetti. This is no surprise in the light of Wolfgang Werner's description of the historical context of fencing in the area (section 3 of this report), and it is likely that fencing in this area dates back to the 1970s. In this area, fencing is largely 'complete' in that it forms identifiable enclosures. To the north and east,

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[68] Digital TM and SPOT data have nominal resolutions of 30 m and 20 m respectively. The hard copies used by Holme and Kooiman had equivalent scales of 1:100,000 and 1:50,000 respectively.

Figure 4.3 NRSC estimate of fencing in eastern Oshikoto (after Holme and Kooiman1994)

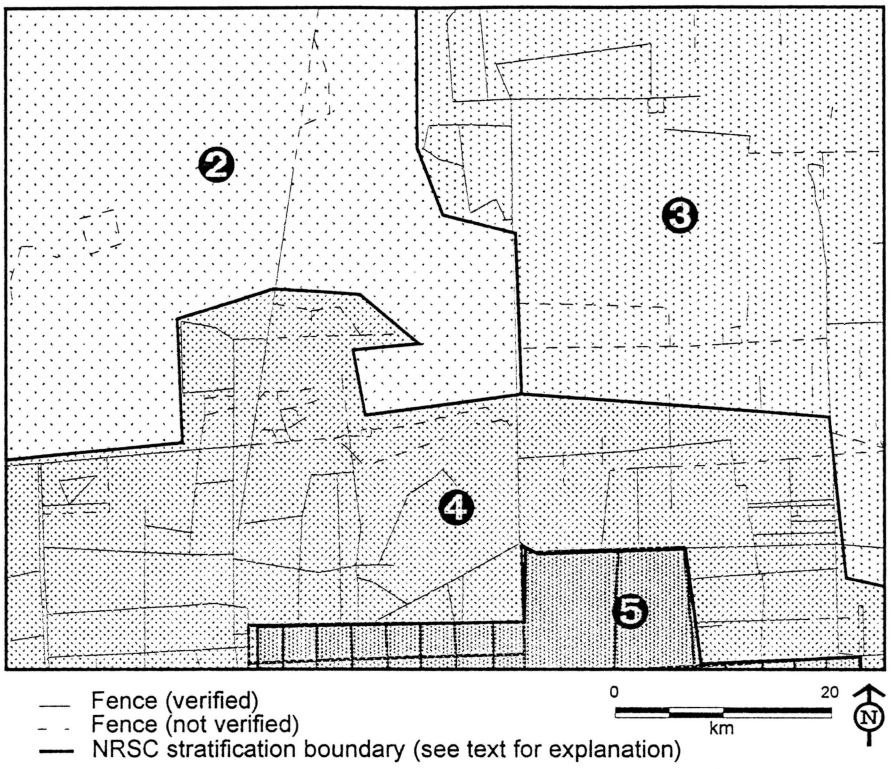

Figure 4.4 NRSC classification of fencing types in eastern Oshikoto

the pattern of fencing is much more extensive, and less organised – with many of the fences not forming discrete enclosures. This piecemeal development could in part be due to the high cost of fencing materials and labour, which may prohibit developers from fencing off the entire perimeter of the allocation (*e.g.* Fuller *et al.* 1996). If this is the case, the pattern also suggests that fencing in these areas has been taking place relatively recently. In contrast, with the exception of the fence running NNE between the areas of Owini and Okengele, there is little in the way of confirmed fencing activity in the north west quarter of the study area.

Holme and Kooiman formalised these broad trends by dividing Oshikoto into five zones based on fencing characteristics. Four of these overlap with the current field area, and numbers here correspond with those shown in Figure 4.4:

> ❷ **The northern zone** containing sandy, infertile soils which form linear dune features to the east, inter-digitating with low lying areas of internal drainage. Holme and Kooiman noted the incipient development of long wire fences in this area, although much of the land remained unenclosed.
>
> ❸ **The north eastern zone**, the most remote of the identified areas, shows a clear linear dune pattern, especially to the south where low lying alluvial soils also predominate. Natural vegetation is woody in the dunes, but more open in the inter-dune sections. This zone was identified as an area of emergency grazing which was experiencing rapid fence and borehole

development.

❹ **The zone surrounding the Mangetti**, estimated to be 80–100% enclosed, although in a less organised pattern than the Mangetti Block itself.

❺ **The Mangetti Block**

Their classification of fencing activity is worth bearing in mind in relation to the following sections, which discuss the pattern of fences in 1997, as estimated from the current field survey – and which also compare the findings to the results obtained by Holme and Kooiman in 1994. Overall, while estimates of fencing for specific areas differ between the two maps, the broad trends summarised above and in Figure 4.3 are consistent between the two surveys.

4.3.2 Fencing in 1997: results from the field survey

Figure 4.5 shows the distribution of fences in the study area, as derived from ground survey and API. From this distribution, the estimated area of enclosed land is shaded yellow. In essence, the distribution of fences is similar to that the of the NRSC survey. The network of fences is most dense in the south of the field area, especially in areas immediately to the north east and north west of the Mangetti Block. In the west and central areas the northern limit of enclosure appears to be relatively consistent (around 18.14°S), with the exception of the farm at Owini, which represents the northernmost enclosure in this part of the field area. Further east, however, there is a more or less complete coverage of enclosures north and south of Onamisu, and respondents in the field indicated that these fences extended east to the Okavango border (19.5 km away). It is these enclosures which are most pertinent to the issue of grazing access for communal livestock, as long range movement of cattle in the area has a strong east-west axis. It is likely that the more established farms to the south interfere little with traditional stock routes (see Carol Kerven's section for more details on these issues).

Comparing the position of fences to that of linear features shown in Figure 4.1, it becomes evident how existing cut-lines have provided foci for fence development. In the eastern section of the field area, for example, fencing appears to be most complete along and to the east of the main cut-line which runs south of Onamisu (Figure 4.5). Lateral spread of these enclosures to the west of the cut-line is so far limited, although some fences do start to run west here, only to be discontinued further on – and it is not clear whether these areas have been allocated as new enclosures or not. This point deserves some elaboration, as the physical extent of fencing may itself not be a reliable guide to land and resource 'ownership', with an absence of fencing not necessarily being an indication that the land has not been allocated. There is, for example, plenty of evidence in the field of fencing 'waiting to happen' – either to the extent that markers have been put in to identify allocated land, or where poles have been laid out in preparation for fencing. On the other hand there were several incidences where fencing had been destroyed and not replaced, or where fence poles that had been laid out had never to be put in place. The latter situation often occurred where a fence boundary was shared by two enclosures – deeming the construction of a duplicate fence unnecessary, but two cases were noted in which isolated fences had been prepared but not built.

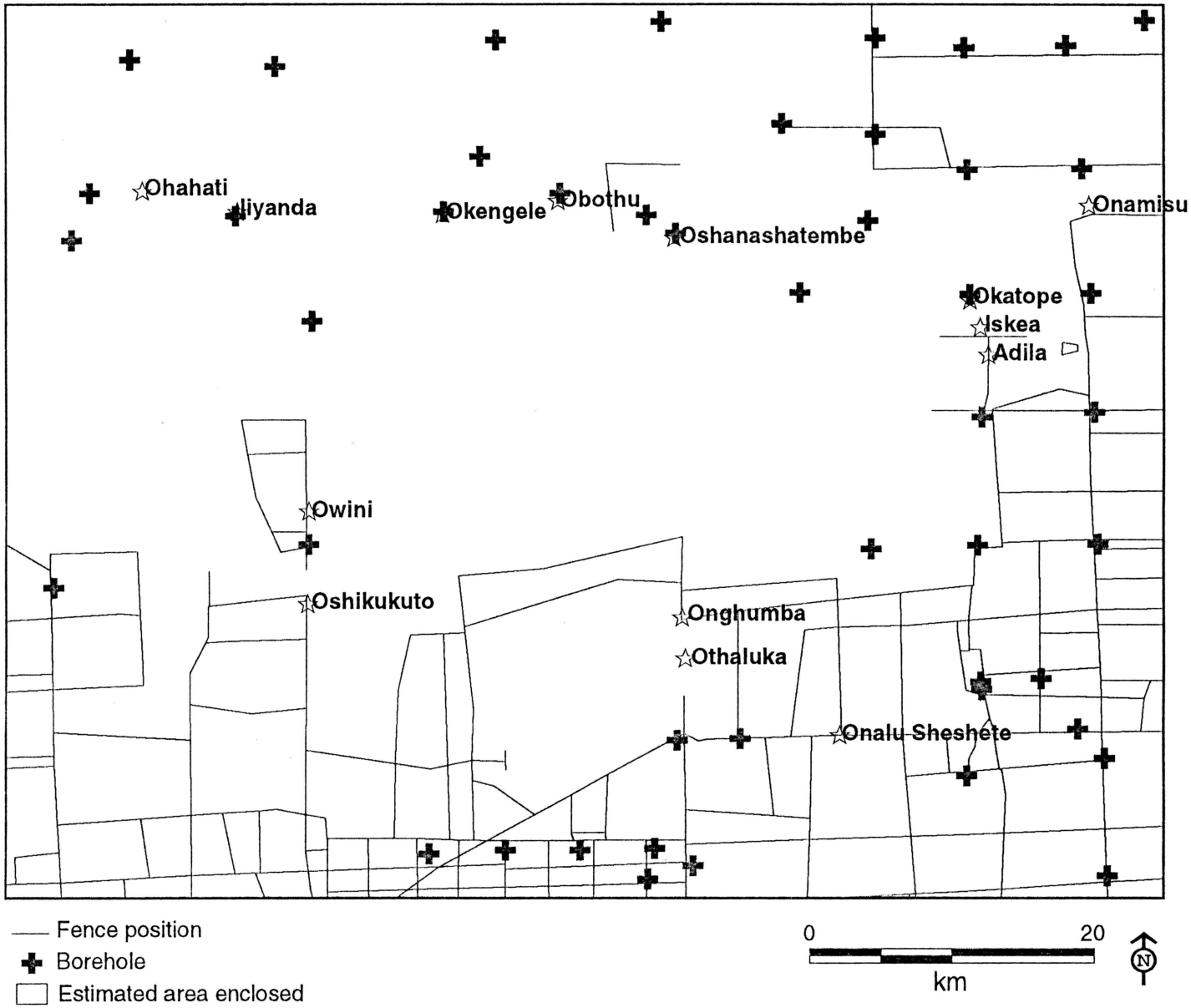

Figure 4.5 Estimate of the distribution of fences and boreholes in eastern Oshikoto, early 1997

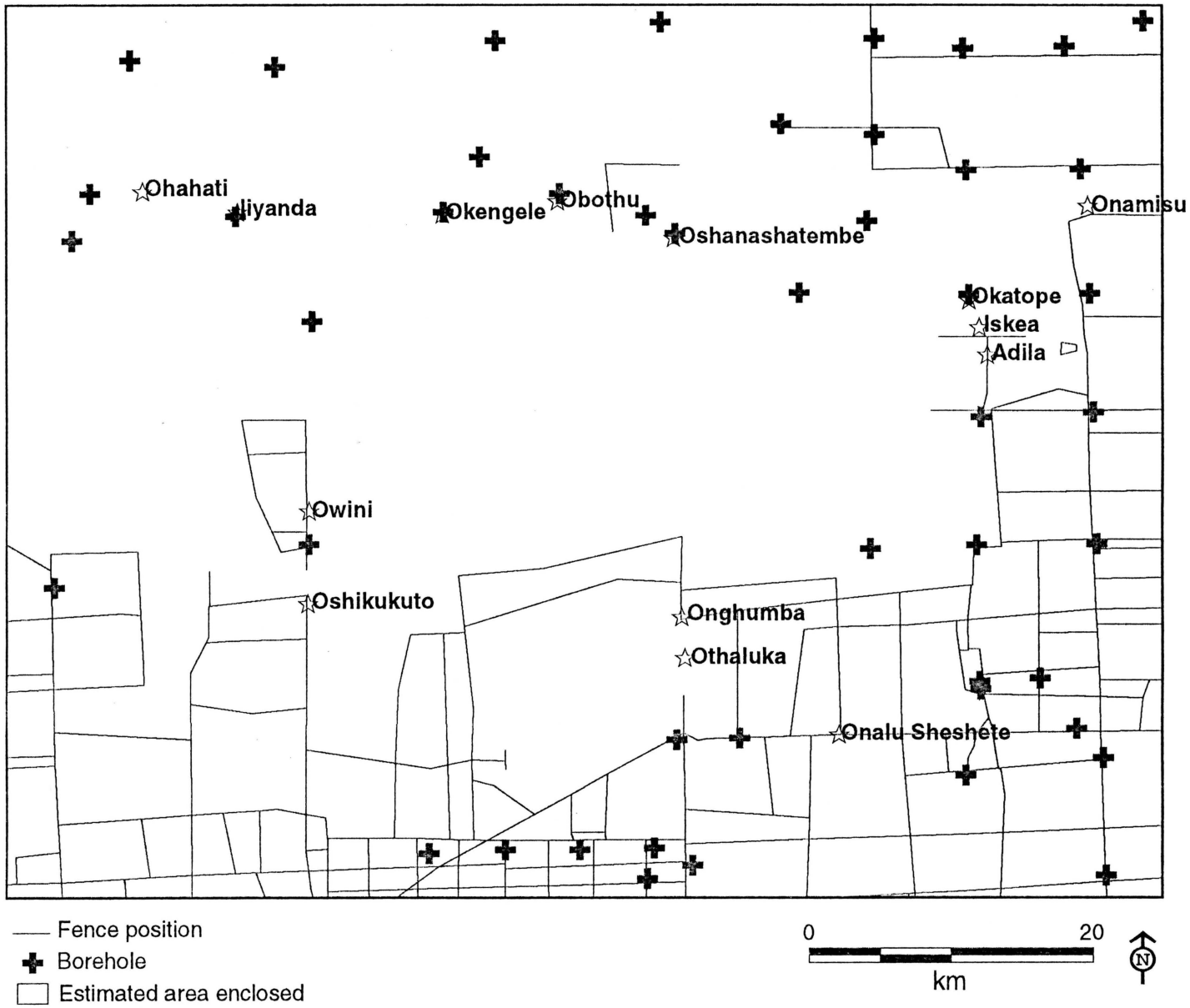

Figure 4.5 Estimate of the distribution of fences and boreholes in eastern Oshikoto, early 1997

development.

❹ **The zone surrounding the Mangetti**, estimated to be 80–100% enclosed, although in a less organised pattern than the Mangetti Block itself.

❺ **The Mangetti Block**

Their classification of fencing activity is worth bearing in mind in relation to the following sections, which discuss the pattern of fences in 1997, as estimated from the current field survey – and which also compare the findings to the results obtained by Holme and Kooiman in 1994. Overall, while estimates of fencing for specific areas differ between the two maps, the broad trends summarised above and in Figure 4.3 are consistent between the two surveys.

4.3.2 Fencing in 1997: results from the field survey

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Included in Figure 4.5 are the locations of boreholes, as taken from Holme and Kooiman's map. The NRSC data include positions provided by the Department of Water Affairs (DWA) and by private drilling contractors. Of the 47 boreholes located in the field area, GPS positions for 14 were obtained during the field survey – and in all cases positions from the two data sources agreed, with very little error. This does not, however, rule out the fact that other boreholes, not identified in the field, may have been created since the NRSC data were collated.[69] In terms of explaining the fencing pattern, access to boreholes is likely to be a key consideration, as water is the principal scarce resource in the area (see Carol Kerven's discussion in section 5.4.2). In fact 31 of the boreholes in the study area lie within or are bordering fenced areas. The apparent correspondence between borehole locations and enclosures is particularly obvious in the east of the field area, where boreholes are relatively new. On the other hand, the central part of the field area is devoid of boreholes and fences also appear to be absent.

4.3.3 Comparison of 1994 and 1997 maps

As has been noted earlier, the present survey is effectively a follow up survey of the NRSC work in 1994 – the original intention being that the two fencing estimates could be compared directly to gauge the extent of new fencing over the past three years. Given that the methods used to create the two fencing maps are different, and that each approach suffers from unknown (albeit similar) potential errors, results from this exercise should be treated with caution. Nevertheless, given that both the 1994 and 1997 maps effectively provide 'best estimates' for those years such a comparison is generally valid. Figure 4.6 shows the two fencing estimates, using a common scale and grid overlay for both coverages to aid comparison. The dashed lines in the 1994 map (top) indicate unverified fences.

Immediately apparent from Figure 4.6 is the general agreement of the overall pattern of fencing in the area – and this corresponds roughly to the NRSC stratification described previously. Areas around the Mangetti are more or less completely enclosed in both cases, and both suggest that the general cut-off of the enclosures occurs at around 18.14° (around the boundary of rows 4 and 5 in Figure 4.6). However, the precise pattern of fences in each case differs in some parts of the south west, especially around cells 5A–5C. In addition, there is some disagreement between the two maps in the quadrant 4B–4C/5B–5C, around the area of Owini (Tobias Farm). Unverified NRSC fences in this area were not confirmed in this part of the field area, nor, more worryingly, could the verified fence running north towards 1C in the NRSC map be found in the field (the linear feature in question being a feint but unfenced cut-line). Thus, while Holme and Kooiman were right to classify the north west part of the field area as largely unenclosed, the 1997 map suggests that they may in fact have overestimated the amount of 'incipient' fencing occurring in the area. The other possibility is that fences which were in place in 1994 have subsequently been taken down.

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[69] Looking at the uneven distribution of boreholes in the enclosed areas of the south central and south west field area, this looks likely. A comprehensive dataset of borehole locations and their properties (privatised/government, solar/diesel *etc.*) would benefit any further analysis of links between borehole distribution and fencing. At present, available data are somewhat dispersed, both within the DWA and among private drilling agents.

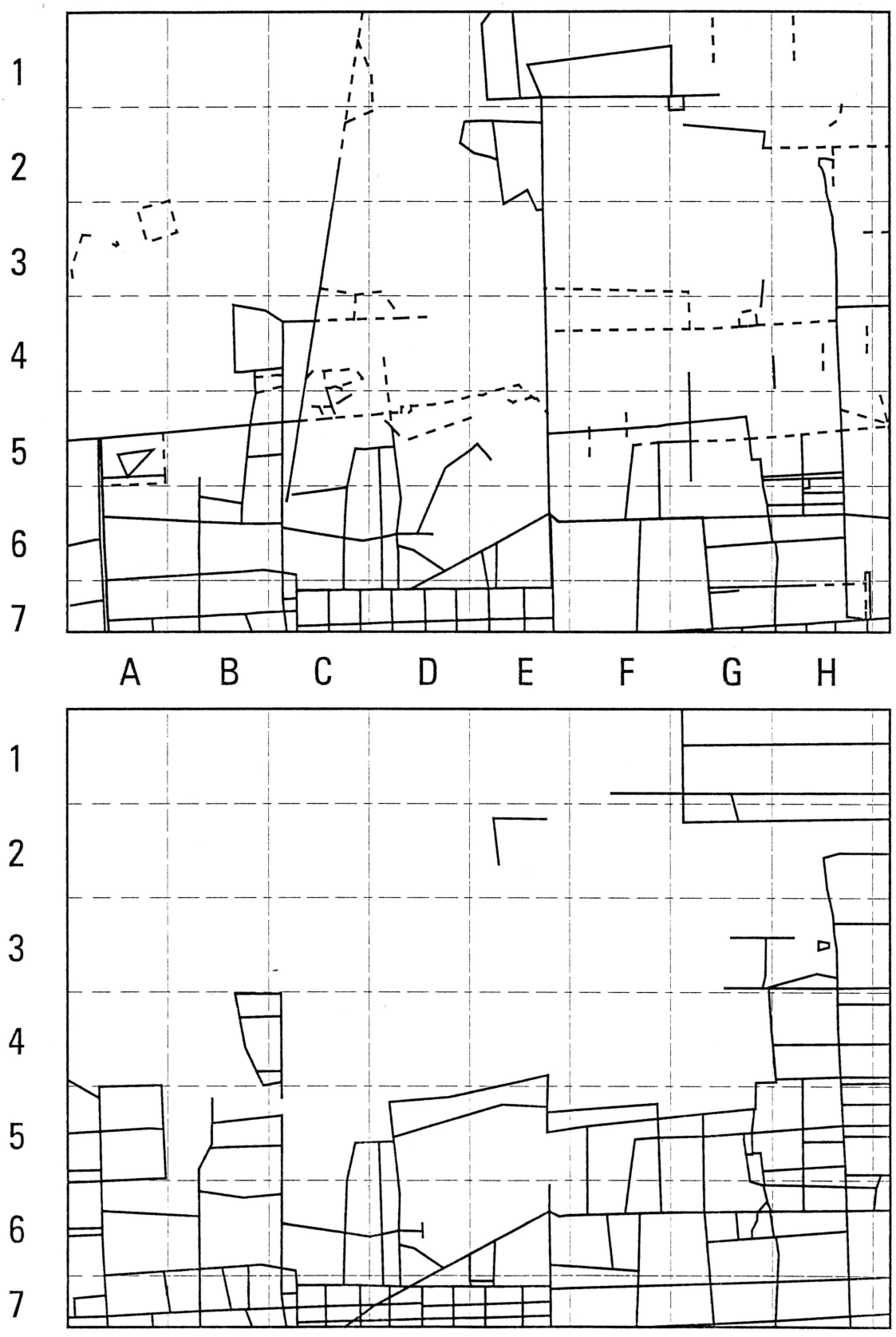

Figure 4.6 Comparison of 1994 (top) and 1997 (bottom) estimates of fencing for the study area

This is also true in the central parts of the field area. There was no evidence for much of the NRSC's verified fence-line along the Luwaya Road, which runs north-south from 1E to 6E. Referring back to Figures 4.1 and 4.3, which indicate the sampling frameworks of the 1997 and 1994 surveys respectively, it is apparent that this area constitutes one of the gaps in the NRSC's aerial coverage, while there are many GPS waypoints for this area in the 1997 survey. This suggests that the 1997 version of events is more reliable. In addition it is unlikely that the enclosure in E2 (NRSC map) still exists today, as local informants indicated that 'some' fences in this area had been taken down after protest. Again, the NRSC map appears to overestimate the degree of enclosure in these central areas.

In the eastern part of the field area there is greater consistency between the 1994 and 1997 estimates, and in this area there does appear to have been extensive development in the years between surveys. Both maps indicate more or less complete fencing along the cut-line which runs south of Onamisu, but whereas in the 1994 map lateral fencing to the east and west of this transect is limited, the 1997 map suggests that these areas have been closed off in the intervening period. As noted previously, the western development of these farms is still relatively limited (and much more limited than perhaps the unverified fences of 1994 for this area suggest), but to the east these farms run to the Okavango border. In addition, the area north of Onamisu now appears extensively fenced, while in 1994 such development was limited (although interpolation of the 1997 fence positions relied heavily on API in this area, as is evident from Figure 4.1). Overall, the evidence from the east concords with Holme and Kooiman's view that 'the large number of new boreholes and new fences established in the last two years gives reasons to believe that many land enclosures might develop in this area very soon if fencing continues at the same speed' (Holme and Kooiman 1994: 12).

In terms of this comparative exercise, the picture that emerges is that only in the east is there any strong evidence to suggest a rapid increase in the area enclosed. These areas, which were in the past lacking any water points, had been used primarily as emergency grazing by communal farmers to the west. The recent advent of secure water in this part of the field area[70] has changed this picture, and has transformed the productive potential of the area. There are, therefore, undoubtedly links between borehole development and farm location (as becomes very apparent in Carol Kerven's section following this), although it remains to be seen at what level this 'connection' operates. Elsewhere in the field area, the differences between the 1994 and 1997 maps are ones of detail rather than general trends – with discrepancies probably more related to different survey approaches and sampling networks than anything else. Thus despite the apparent spread of fences in the east of the field area, this trend is not picked up in comparisons between total area enclosed and total fence length in 1994 and 1997 (Table 4.2). The Table shows comparisons between parameters of the 1997 fencing map and that of the NRSC map (verified fences as well as total fences). The 1997 estimate of total length of fencing (1,141 km) is higher than the NRSC verified figure (1,006 km), as one would expect, but is actually lower than the length of all NRSC fences in the area (1,321 km). The same is true for the total area enclosed; the 1997 estimate (232,600 ha / 41%) being between the two NRSC estimates (180,680 ha / 32% and 277,580 ha / 49%).

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[70] Most boreholes in the area appeared after 1992, as indicated by their absence from NRSC imagery for that year (Holme and Kooiman 1994: 11).

With reference to the two fencing maps in Figure 4.6, it is worth reiterating that in both cases the fence maps constitute surveys of fence positions and do not provide complete information about land ownership, or the position and size of individual enclosures. In the latter case it is not immediately clear from either map (although in some cases it can be inferred), which fences delimit farm perimeters, and which constitute paddock fences *within* larger farms. Thus it is not possible, for example, to generalise about the average size of farms in the area, or the size of individual enclosures. To achieve this would involve collecting of data from respondents in the field regarding land ownership and the fencing history. Given the time frame of the current project this was not viable in this instance.

Table 4.2 Comparison of fencing and enclosure estimates from 1994 and 1997

	Fencing parameters		Enclosure parameters	
	n	Total length	Enclosed (%)	Unenclosed (%)
NRSC (verified)	237	1,006 km	180,680 ha (32)	381,514 ha (68)
NRSC (total)	317	1,321 km	277,580 ha (49)	284,614 ha (51)
Current estimate	344	1,141 km	232,600 ha (41)	329,594 ha (59)

4.3.4 Results from API

Figure 4.7 shows coverages derived from API for linear features, fields and animal tracks, which together provide further insight into land use patterns in the area. For reference, the area defined as enclosed (as taken from the 1997 survey) is shaded yellow. The Figure shows that the distribution of agricultural land use is heavily weighted towards the north west of the field area. The pattern of fields is particularly dense in the areas around and to the north of Ohahati and Iiyanda, becoming less dense further east, and particularly east of Obothu. This is consistent with the historical picture provided by Fuller *et al.* (1996) and in the introduction to this report, in which mixed farming has been spreading eastwards from the more populated areas adjacent to the Oshana system of west Oshikoto. However, it is difficult to envisage mixed farming spreading any further east due to the presence of enclosures in the area of Okatope and Onamisu. Whether or not this also holds for the westwards extension of enclosures is less certain – the conventional view is that enclosure has so far been limited to 'unutilised' areas, and that there have been few cases where the two different forms of land use have been brought into conflict. Evidence from Fuller *et al.* (1996) and Kerven (this report), may cause some reassessment of this view, however. Certainly there are no enclosures at present in the relatively heavily utilised areas around Iiyanda and Okengele, but the status of land to the south and east of Oshanashatembe is less certain, and needs to be monitored.

Interestingly there are isolated fields within the enclosed areas in the south of the field area, including the Mangetti Block. In some areas, fields are grouped to form quite extensive agricultural areas, such as at Oshikukuto, and these tend to be associated with medium to fine

This is also true in the central parts of the field area. There was no evidence for much of the NRSC's verified fence-line along the Luwaya Road, which runs north-south from 1E to 6E. Referring back to Figures 4.1 and 4.3, which indicate the sampling frameworks of the 1997 and 1994 surveys respectively, it is apparent that this area constitutes one of the gaps in the NRSC's aerial coverage, while there are many GPS waypoints for this area in the 1997 survey. This suggests that the 1997 version of events is more reliable. In addition it is unlikely that the enclosure in E2 (NRSC map) still exists today, as local informants indicated that 'some' fences in this area had been taken down after protest. Again, the NRSC map appears to overestimate the degree of enclosure in these central areas.

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[70] Most boreholes in the area appeared after 1992, as indicated by their absence from NRSC imagery for that year (Holme and Kooiman 1994: 11).

textured soils.

Figure 4.7 also shows in red the pattern of dark streaks on the air photographs, which were interpreted as animal tracks. Their distribution in relation to other land use features confirms this interpretation and indicates the relative importance of the non-privatised boreholes and wells at Iiyanda, Obothu and Onamisu. Obothu has a particularly large catchment area. To the east it appears that the wells at Onamisu are still an important source of water for animals from the west, despite problems of access in the area.

4.3.5 Results from image processing

During the field survey it became clear that soil conditions varied considerably within the study area, and that there was a particularly clear distinction between heavy alluvial soils in areas of internal drainage, and sandy soils elsewhere. There was also some evidence that a soil catena exists in the dune areas, where clay soils, medium sands and fine sands appear in association depending on relative elevation. At the same time, evidence from the field as well as elsewhere (*e.g.* Holme and Kooiman 1994; Kerven, in this report) suggests that soil type is viewed locally as a key indicator of pasture quality, and that areas of alluvial soils in particular are seen as producing excellent pasture (*omukumwa*). For these reasons it was decided that a map of soil types may be a useful addition in any examination of the distribution of enclosures.

For this part of Namibia there are no secondary soil data, so only qualitative distinctions based on gross soil characteristics are possible. In this case it was decided that a simple coverage would be created, based on three primary soil classes observed during fieldwork, *viz*; medium to heavy alluvial clay soils in low lying areas; fine sands; coarse sands. In terms of key resources it is the distinction here between the first class and the others that is of most interest, as the first class represents clayey soils with relatively high organic carbon contents and cation exchange capacities – chemical properties which to a large degree determine soil fertility. On the other hand, the remaining classes, which constitute poor sandy soils (*etofa*), are not valued highly by the local population.

As introduced in section 4.2.3, supervised multi-spectral classification was used to classify the image, in this case using bands 3 (red) ,4 (NIR) and 7 (IR). Training sets for clay soils, medium soils and coarse sandy soils were defined interactively by delimiting blocks of pixels around selected ground observation points. Training sets were modified several times in an attempt to optimise class distinction (as indicated in the SIGCOMP and SCATTER module of IDRISI).

The result of this classification is shown in Figure 4.8, in which blue-black cells represent alluvial areas (predominantly clay), red areas represent intermediate soils (predominantly fine grey sand with some clay) and yellow areas represent sandy soils (arenosols). From this it would appear that alluvial soils are found more in the east of the field area than in the west. These soils have a tendency to occur as narrow bands in inter-dune areas, particularly in the south and east – although this classification also suggests relatively extensive areas of alluvial soils exist in the south east and north central parts of the field area. The more sandy soils (red and yellow cells) are universally distributed throughout the area.

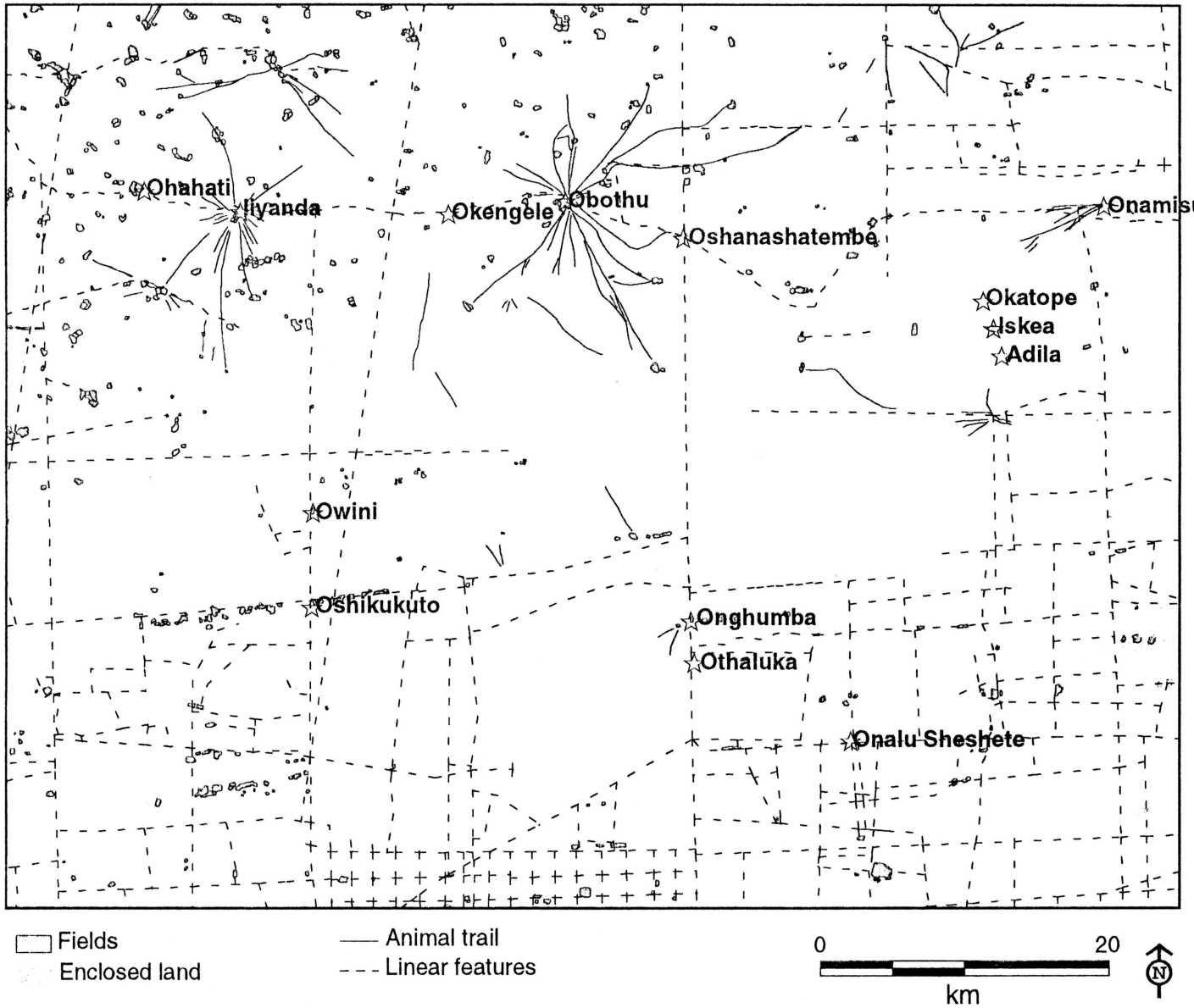

Figure 4.7 Distribution of linear features, fields and animal trails from API

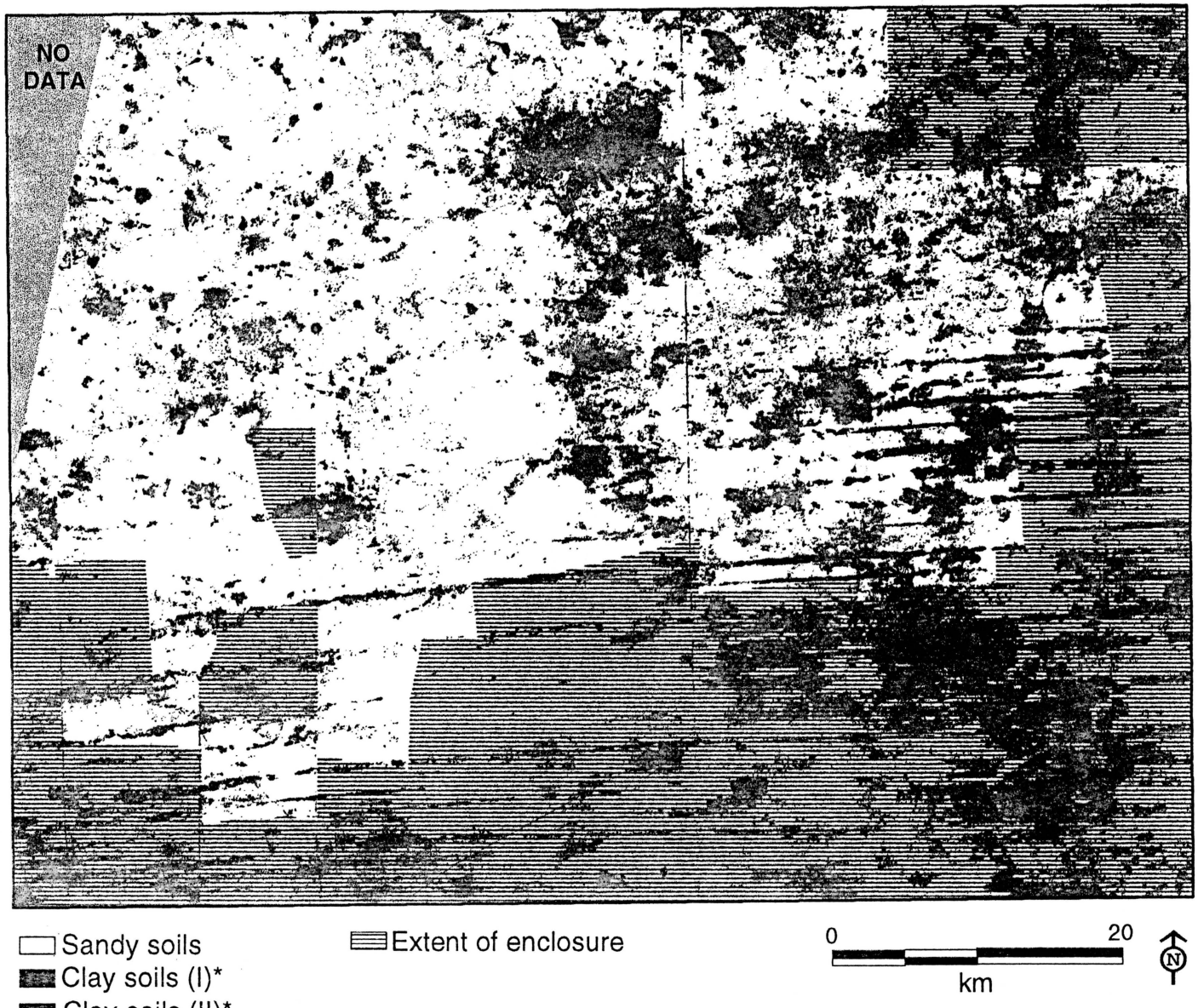

Figure 4.8 Results of supervised classification based on gross soil properties

Comparison between the distribution of alluvial soils and the extent of enclosed land, as indicated by the dark blue hatching, did not produce conclusive results. While it is true that many of the enclosures in the south east corner of the study area (and perhaps more pertinently to the east central areas) are associated with alluvial soils, it is also clear that extensive areas of alluvial soils are found in the unenclosed areas of the north central part of the field area. Thus while good soils may have preferentially encouraged fencing in the east, the factor may not, on its own, be enough to promote enclosure where other factors (*e.g.* competing communal resource users, poor access) are less encouraging.

The interpretation above is speculative and exploratory, in part because the accuracy of the soil classification is unknown in many areas. Additionally, in areas where it can be assessed it does appear that the distribution of alluvial soils is overestimated. Field evidence does not suggest that alluvial soils occur in large areas, as the supervised classification results here indicate. It is more likely that the blue areas include sandy soils which occur in complex with the alluvial soils, and that other surface features (land use/vegetation) have led to confusion between soil classes. For example looking at Figure 4.8 it is clear that there is mis-classification of linear features, such as the Luwaya Road which runs north-south in the centre part of the field area. This area is sandy, but it appears that its spectral response is similar to that of the training pixels for alluvial areas. In other words, it is likely that most of the variation in spectral response in the area is determined by vegetation cover – and the relatively small degree of variability associated directly with soil type is not an adequate basis for discrimination. This type of mis-classification is also evident for the second soil class, shown as red cells, which appears to be confused with agricultural land in the north west corner of the study area.[71]

In fact meteorological data for this period suggest that vegetation cover should only be average, although these conditions clearly present problems in terms of masking the spectral response of the soils. Rainfall data (Figure 4.8) indicate that conditions at the time the satellite image was taken (30 July 1986) were typical both for the season and year (Okakeujo and Namutomi are stations in Etosha National Park, to the south west of the study area). The upper graph shows the seasonal rainfall profile for the two stations, neither of which differ significantly from the average profile for both stations for the 1913–1995 period. The lower graph shows that annual rainfall for these stations for the 1985–6 season are again around average, and that there had probably been no significant rainfall events in the area since March.[72] Given these conditions it was felt that a more reliable estimate of the distribution of alluvial soils could be derived using a 'tasselled cap' transformation of the TM data (Kauth and Thomas 1976). This transformation produces a soil brightness index (SBI) which represents the background soil brightness and soil moisture, one of four new bands extracted

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[71] Variations in surface structure brought about by cultivation can also lead to differences in spectral response where they mask the effects of soil texture and chemistry. Crusted soils and flat clay soils have higher spectral responses than rougher (including recently tilled) soils.

[72] Although the patchiness of spatial rainfall distribution in semi-arid areas means we cannot assume Namutomi and Okakeujo figures are necessarily valid for the field area, especially in terms of specific rainfall events.

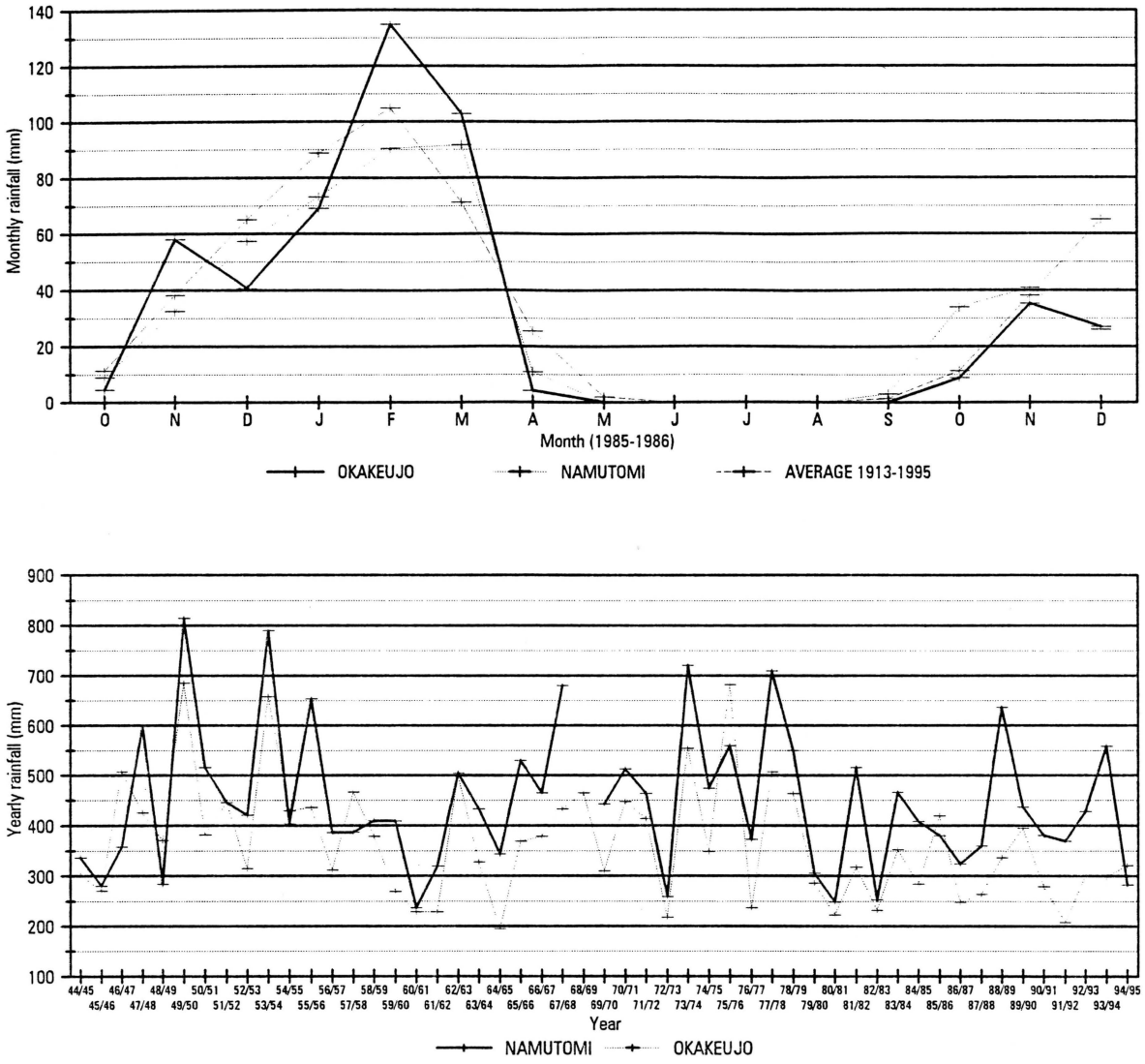

Figure 4.9 Long and short series rainfall data for Etosha National Park

from TM bands 1–5 and 7 using this algorithm. The results, shown in Figure 4.10 indicate low reflectance soils (containing clay minerals and residual soil moisture) as dark tones, and high reflectance soils (sandy, quartz dominated, with no residual moisture content) as bright tones. While the general picture obtained from the supervised classification is repeated in Figure 4.10, the spatial extent of the alluvial soils (dark brown cells), is much more limited, and therefore more realistic – although the pattern of these cells in the northern half of the area suggests there may still be spectral confusion based on the presence/absence of vegetation. With the positions of fences overlayed on the SBI data, the argument that recent fencing in the southern/eastern parts of the area has been encouraged by the presence of good soils is a possibility, but there is no way of validating this without information from the new farmers themselves.

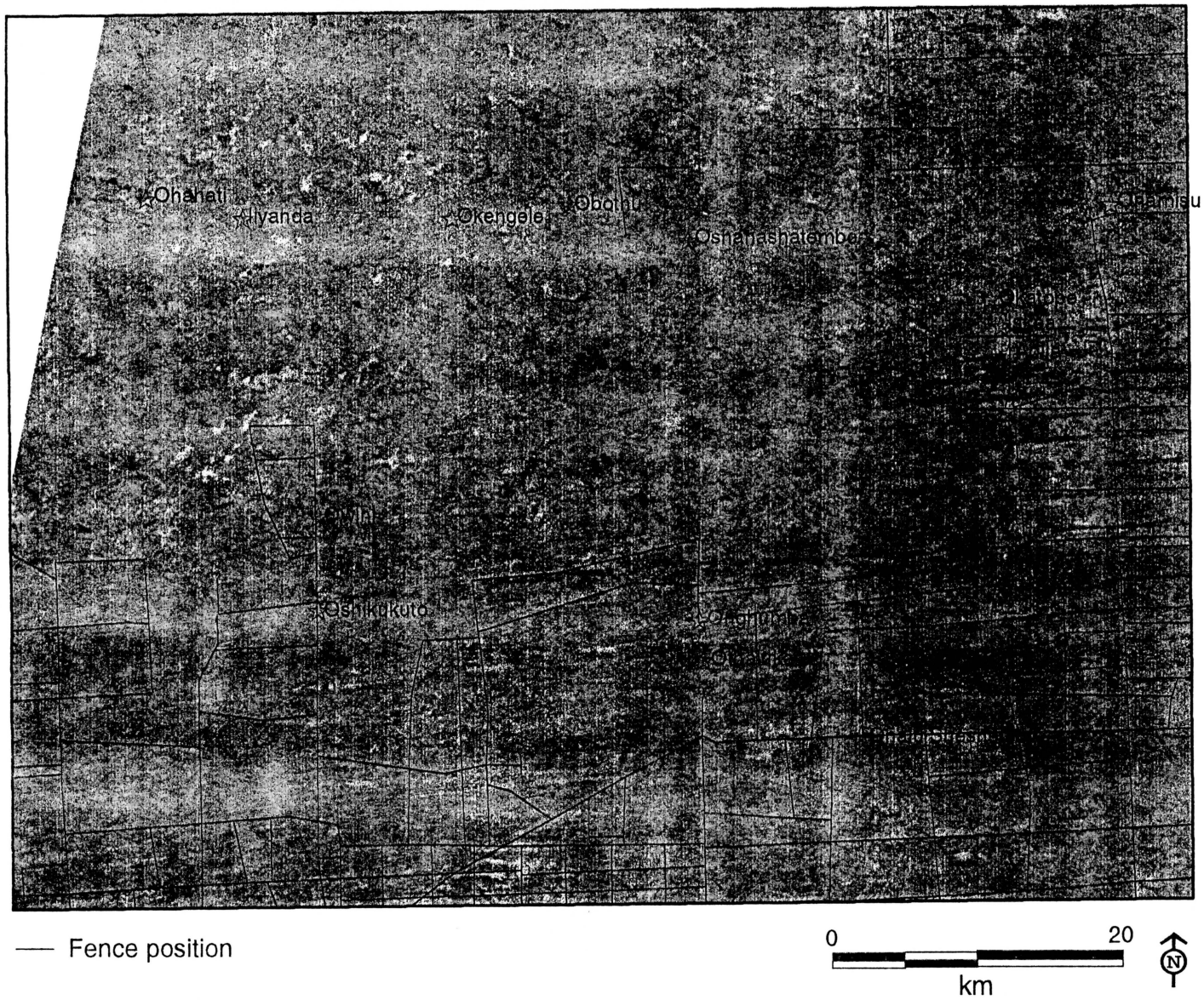

Figure 4.10 Taselled cap transformation of Landsat TM bands 1–5,7, showing soil brightness index

4.4 Summary and conclusion

This section has attempted to provide an objective assessment of the nature and scale of fencing activity in eastern Oshikoto. As with any survey, the resulting map (in this case of fence distribution) is only an estimate of the true situation on the ground, based on a finite number of sampling points. Various potential errors in the survey and GIS processes mean that the results are indicative but not definitive, and should always be presented and cited as such.

The maps of fencing and other features presented in this section bear out many of the points made in this and other reports. They show that the majority of fencing in eastern Oshikoto has so far been concentrated in areas bordering the Mangetti Block, where enclosures form relatively organised, discrete units. In contrast, areas in the north and west of the field area, around settlements such as Okgumbula, Okengele and Oshanashatembe do not contain any enclosures. Land use in these areas, as determined by API, is dominated by a mixture of dryland agriculture and livestock husbandry, with cattle trails indicating the importance of boreholes and hand-dug wells in the unenclosed areas. Areas in the north east, however, do appear to be extensively fenced, and a sharp dividing line between 'communal' and 'private' forms of land use is now apparent – any pre-existing buffer of 'under-utilised' land having been denuded. A comparison between the results of this survey and that of the NRSC's survey of 1994 highlights this as an area of rapid change, with significant developments occurring over the past 3–4 years. In other areas the pictures of fencing presented by the two surveys are broadly similar. There are, however, substantial differences of detail between the two surveys, which should alert readers to the potential errors associated with these surveys.

This section has also presented contextual data for the field area from the ground survey, API and satellite data. These data were used to create a variety of GIS coverages for settlement, boreholes, land use, tracks and soils, which were compared qualitatively with the distribution of enclosures. Given that secondary data for soils, vegetation *etc.* are not available for this part of Namibia, this exercise was exploratory, and was restricted to identifying correspondence between factors, rather than causal links. As would be expected, there is a clear negative correlation between the presence of enclosures and settlement/agriculture – indicating either that enclosure has so far been restricted to uninhabited areas, or that people have been forced off the land. So far the evidence points to the former case, although this may not necessarily be true in the future. Otherwise, accessibility seems a major determinant of the distribution of fences. The main route through the field area, which runs east from Mangetti is completely enclosed, while the cut-lines which run north-south off this route are themselves becoming increasingly fenced. Efforts to relate soil type to the distribution of enclosures were hampered by the lack of soil data and vegetation masking in the satellite imagery. Tentative coverages for soil show a possible association between alluvial soils and fencing, but this type of work would require extensive ground checks and information from local land users.

5 THE KNIFE CUTS ON BOTH BLADES: REDEFINING PROPERTY RIGHTS IN EASTERN OSHIKOTO

CAROL KERVEN

5.1 Introduction

The preceding sections of this report have set the background to the enclosure issue in Namibia, and have assessed objectively the magnitude of the fencing problem in eastern Oshikoto. This section considers some of the observed and potential impacts of these changes in land management in terms of livestock output, natural resource management, and social equity.

The issue of private fencing of Namibia's open rangeland areas is controversial and is once again being publicly discussed, following the publication of a draft Communal Land Bill in October 1996. A number of front-page stories have appeared in the newspapers recently (for example in *The Namibian* 25/29 October, 21 November). Strong views are expressed by the protagonists, although the opinions of those most immediately affected – the livestock farmers in remote areas of Namibia – have not yet been widely reported. This section in some measure gives their views a chance to be aired. It is also important that the views of those involved in enclosing the rangeland be heard, and this paper tries also to do justice to their position.

The primary material presented here was obtained over two periods of field work; three weeks during the Namibian winter in July–August 1996, and two weeks at the end of the dry season in October of the same year. One of these weeks was spent in the village of Okgumbula, 140 km east of Oshakati. This site was selected as a starting point as the government councillor for Engodi Constituency resided there, as well as the traditional headman for most of the study area. A further five days were spent at the hamlet at Okengele borehole, 54 km further east. The study area is remote and very undeveloped, traversed only by ungraded sand tracks, and there are no commercial or social facilities (*e.g.* shops, telephones, clinics, fuel stations *etc.*) east of Okgumbula. A week was also spent interviewing key informants in the towns of Ondangwa and Oshakati. The second field trip began with four days of discussions with informants in the two towns, followed by five days at the borehole of Omboto, 10 km east of Okengele and nearer to the main areas of enclosures in the study area. Three days were then spent camping on a newly-fenced farm next to Onamisu borehole and the field work concluded with two days of interviews with officials in Ondangwa and Oshakati.

The principal method of investigation was open-ended interviews on the key socio-economic topics of the research. This research did not include collection of any quantitative data, as the overall research plan did not allow for the time necessary to design, carry out and analyse a quantitative survey. In the rural areas, interviews were held with headmen of ten different settlements, with herders accompanying their livestock at the water points, with women and men farmers living in the settlements visited, with employed herders on the fenced farms and with herders encountered in the bush along the tracks travelled. In the two towns, interviews were held with government officials in different directorates of the Ministry of Agriculture,

Water and Rural Development (MAWRD), with the Ndonga King and his councillors, as well as with the President of the Namibian National Farmers Union and the regional representative of that Union. There was also an opportunity to interview two commercial farmers living adjacent to the study area, in the designated commercial farming area south of the veterinary cordon fence.

5.2 Seasonal grazing patterns

Eastern Oshikoto and Ohangwena (bordering on the Okavango river to the north) have long been areas of temporary dry season grazing for farmers from the more densely settled areas to the west (Kreike 1994b). The Ovambo people have customarily sent their cattle away from the settled areas after the harvest, to be tended by herders for the entire dry season at different cattle posts *(ohambo)* situated by shallow or deep wells (Williams 1994). During the 1950s and 1960s a number of boreholes were drilled in the area, but many were destroyed or abandoned in the independence struggle. Some settlers also left due to the conflict, but have started coming back to previous settlement sites.

Graziers became increasingly attracted to the thickly-wooded areas of eastern Oshikoto following water development programmes which began in the 1970s and culminated in the 1990s with a major government borehole installation programme initiated as part of drought relief measures (Groundwater Consulting Services 1994; DWA 1995). The new boreholes also attracted the attention of others who saw an opportunity to open up commercial ranches by privatising the rangeland around boreholes. Thus began the competition for grazing and water resources between mobile, subsistence-oriented livestock farmers from the west and north, and town-based commercialising ranch-owners.

Livestock kept by villagers in the western settled areas are grazed on a pattern of transhumance (see Figure 5.1). Migratory herds combine the cattle from several close relations (often brothers) and are herded over distances of several hundred kilometres for at least half the year (and often longer). This is essentially an elongated grazing rotation, since herders try to move their herds to fresh pastures as frequently as possible. Mobility is partially determined by the availability of water in the dry season. However, not all livestock are taken on transhumance. Generally, the immature cattle (*omitanda*) and goats remain at the settlements, while oxen and mature milk cows are moved to better grazing away from settlements. The immatures are left behind as they can get easily lost in the bush, while oxen and cows, being prized, must receive the best grazing and are sent on transhumance.

The cycle of livestock movement starts with the move eastwards after the harvest when livestock have consumed most of the stubble from grain fields, and natural ponds (*endombe*) begin to dry up. This is the dry season (*okwenye*) from about June to November, and the cattle are moved slowly eastwards by groups of young men (*amati*), grazing new pastures as they move. This process of movement is termed *onthanda*. Water in the dry season is taken from wells or, increasingly, from boreholes. Once the rainy season (*ukulombo*) begins, some of the milk cows will be brought back to the villages, provided there is sufficient grazing, in order that families can have the benefit of the milk. Plough oxen must also be returned to the villages as cultivation takes place at this time. But the bulk of the oxen and milk cows may remain at the cattle posts throughout most of the rainy season, and return only briefly to the

villages for the following season, (*ukufu*) the time of harvest from April to July. Cattle are brought back home at this season in order to manure the fields and feed off the post-harvest stubble, while the herdboys are re-united with their families.

There is also some north-south transhumance, on a smaller scale, and centred around the new boreholes dotted along the main west-east road (see Figure 5.1). Very few cattle are sent to graze in the areas south of Okgumbula as the soil is described as very sandy (*etofa*) and cannot hold water even in the rainy season. There are only a few deep wells which provide

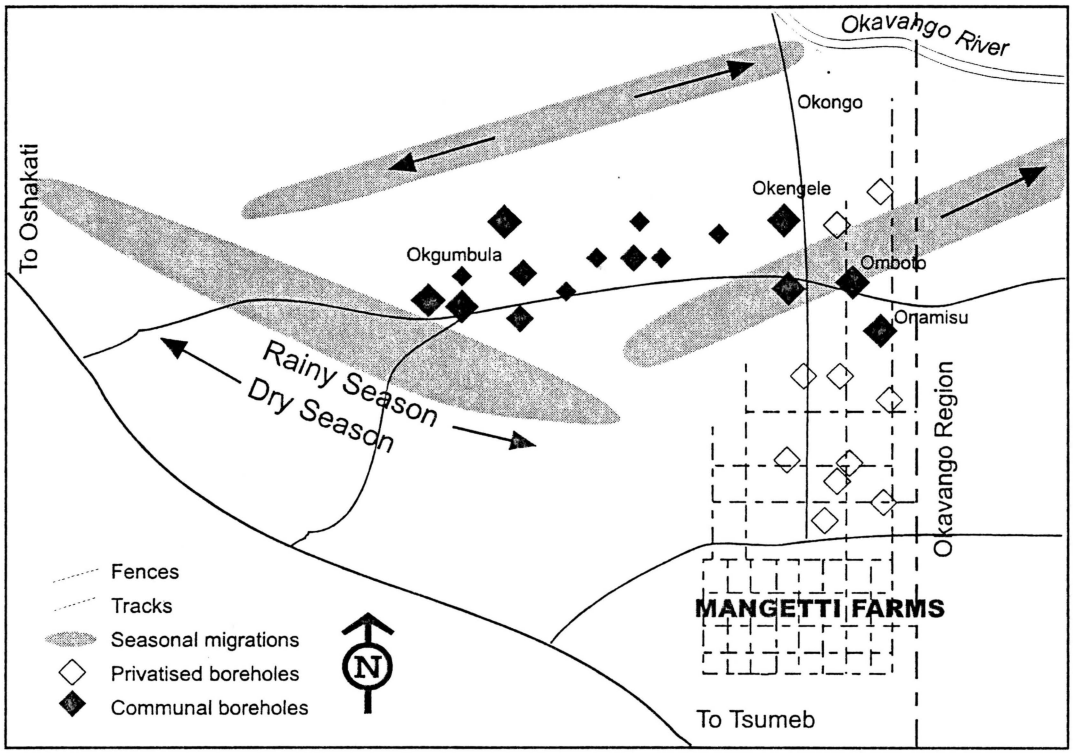

Figure 5.1 Sketch map of seasonal migration and fencing in eastern Oshikoto

water for cattle in the dry season, in the southern zone.

The length and direction of transhumance is determined by the quantity of grazing available. Following good rains, cattle are kept around the settlements for longer after the harvest, before being sent off to the cattle post zones. Similarly, cattle may be brought back earlier from the cattle posts to the villages if there is ample green forage early on in the rainy season. If, however, the rains are poor, a herdowner may have to send his cattle further afield to find sufficient pasture. How far away and how long cattle can be herded at cattle posts depends also on the labour a family has available, and the number of cattle. A family with no young men willing to herd or a family with few cattle will not send their cattle far. But a relatively large cattle-owner will divide his herd into several groups, each under the care of a young male relative (typically a son, grandson or mother's brother's son, the latter under the matrilineal kinship system being a man's heir).

The patterns of movement and settlement in Oshikoto are propelled by the search for good pasture and water, and are a response to increasing population pressure in the *oshana* (flood plain) farming area to the west of the study area. Both for people moving through with their

cattle or settling in to farm, access and use of natural resources has been governed by customary regulations, now changing, which are summarised next.

5.3 Customary practices relating to land and water property rights

Oshikoto lies within the Ovambo tribal leadership of the Ndonga-speaking peoples. The Ndonga king, Eliphas Kaluma, resides at his palace near Ondangwa, and presides over a council of senior headmen or councillors (*elenga enene* sg.; *omalenga* pl.), who have jurisdiction over land allocation as well as other matters of customary law within Oshikoto (see Figure 5.2). According to Williams (1994), this political structure is embedded in the past, although the present-day form is attenuated. The traditional leaders are the *omalenga* (councillors), while recently (according to Malan (1995)) a lower level of sub-headmen has been added to the hierarchy. The Ndonga area is divided into nine senior headmanships or districts, (*oshikanjo* in Oshindonga; *lyoshitopulua* in Oshikwanyama language) of which four are located within Oshikoto. The study area falls within the jurisdiction of a traditional sub-headman, Mathieus Nghipunya, who resides at Ohamuteya village adacent to Okgumbula village. Mathieus is responsible for 37 villages (*emekunda)* and their village headmen (*mwene omekundu*), stretching all the way to the Okavango border. He reports to the traditional senior headman (King's councillor) for the district within which the study area falls, who is Wilpard Mwandinge, residing at Amuteya village. The traditional sub-headmen are selected by the traditional Ndonga councillors and report through them to the King.

Although the study area lies within the traditional jurisdiction of the Ndonga and continues to be the most important Ndonga grazing area, for some decades the Kwanyama have been using the area as a grazing resource and are increasingly being given permission by Ndonga traditional authorities to settle within the area (see also Fuller *et al.* 1996 and Werner in this report). Pragmatic considerations mean that in-migrants from other tribal areas usually take on a local identity. As one old man who had moved into the area put it, 'I myself am Kwanyama but now I am Ndonga as this is Ndonga land.'

Land allocation is administered according to the type of usage. With regards to grazing land, a senior headman cannot give permission for an area to be used as grazing, as it belongs to the traditional authority as a corporate body. A senior headman may only allocate land to be used for cropping and residence. The matter of fencing will be discussed below.

The process of land allocation was described by various informants as follows. The first stage of moving into a new area occurs when cattle are herded seasonally by young men and boys at the *ohambo* (cattle post). A cattle post may have some basic wooden shelters for sleeping. Since seasonal cattle herding is migratory, such that cattle are being moved to different grazing areas within walking distance of a water point, herders may sleep in the open or at relatives' cattle posts en route. One of the distinguishing features of a grazing area is that no one has had to pay an 'occupation fee' to be allowed to graze their cattle there (in contrast to land opened up for farming and settlement).

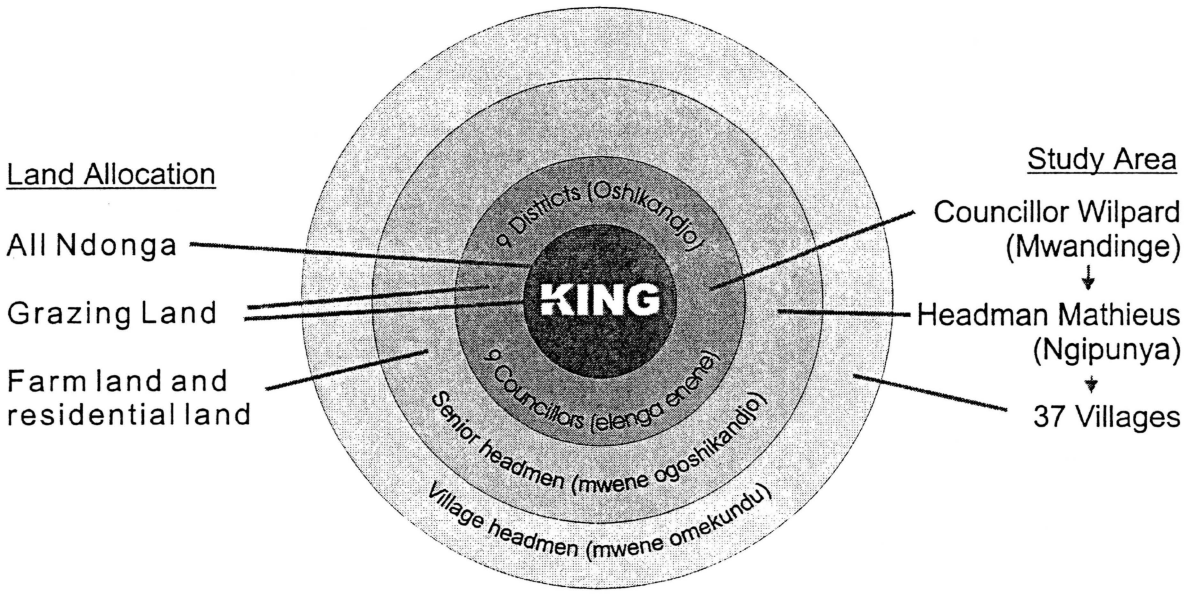

Figure 5.2 Traditional Ndonga hierarchy (showing Eastern Oshikoto headmen)

Once a head of a family decides to construct a homestead (*ewumbo)* and begin farming at a cattle post, he must first 'survey' the area and talk to his prospective neighbours to determine whether there is enough space for his cattle to graze and whether he would be accepted by the existing settlers. He must then approach the sub-*elenga enene* to make his request and to pay a fee. There are two stages to securing such tenure rights; the first stage is *ukuawonda onele* (engagement fee), and the amount varies according to the size and quality of the grazing around the settlement site. The maximum fee is said (by senior headmen) to be below N$ 1000,[73] which can be paid in the form of a cow or in cash. When a head of a homestead dies, it is the responsibility of the senior headman to report this to the King, as the land formerly allocated to the man now deceased reverts back to the traditional authorities who can re-allocate it to another family, on payment of another fee to the King through the senior headman.

Grazing land on which no settlement has been erected is handled differently. Since unsettled land by definition still belongs to the tribal authorities, they state that it is within their purview to allocate individuals the right to graze animals in a particular area. Generally, reciprocal rights of access prevail on grazing land within Oshikoto. Settlements do not have exclusive rights over the open grazing areas in their vicinity, but usage of grazing land is controlled *de facto* through the ownership and control over water points, especially in the dry season (see also Kreike (1994b)).

In the long dry season, the only natural source of water for livestock from Oshikoto is the Okavango river. Otherwise livestock must be watered from man-made water points, of which several types exist in Oshikoto. Older records note that the 'owner' of a cattle post (*omwene*

[73] Exchange rate (late 1996): 4.6 N$ = 1 US$.

wohambo) was the lead herder during transhumance, and would usually be the person who dug or developed a water point at a grazing area (Kreike 1994b). Once a water point was developed, the position of 'owner of a cattle post' could also be inherited. But the right of ownership could not be exchanged or sold, only inherited. Whoever controls these water points has some measure of control over the grazing area within a two-days walk (by cattle) to the water point, that being the minimum watering frequency for cattle at the end of the dry season.

Hand-dug wells were, until the post-independence period, the primary source of water in the dry season. Shallow pits *(omatambi; etambi* pl.) are dug down to a depth of about 3–4 m to reach the water table. Deep wells (*ondungu)* are lined with mud bricks, and their depth may extend to 30 m (other types of shallow wells are termed *omatope; etope* pl.). These wells were valuable resources in an otherwise waterless land, and those who constructed them were considered as their owners, and had to give permission before any one else could use them. This permission was given on a reciprocal basis. In the eastern part of Oshikoto, (the study area), where soils are described as water-holding, individual herding units had dug *omathima* (shallow wells) which were protected with thorn bush fences. These wells formed an essential nucleus around which cattle could be moved over the course of the long dry season. Although individual property, these wells constituted a network which allowed herd mobility. As one herder explained:

> 'These four wells [which he dug] are not close to each other. They are for my cattle, but I can help other cattle owners who are passing through, to use my wells for water, as I will need help from others while I am in transit.'

It is unclear whether individuals who constructed hand-dug wells had to make a payment to the *elenga enene* in return for gaining exclusive water rights, as claimed by some of the officers in the Department of Water Affairs (DWA) as the reason why some boreholes later sited at traditional well points have been privatised. No informants in the study area ever mentioned having paid a 'fee' to traditional authorities for the right to build a well. This is a point we shall return to later. Further information on customary rules pertaining to water rights is given in the section by Wolfgang Werner in this report.

Construction of a well is not only a means to establish claims over surrounding land, but also to establish local political authority. To the west of the study area, settlement began earlier than in the study area (some two decades ago) and was based around hand-dug wells constructed by the pioneering settlers. Typically the settler who made the well or wells became the village headman (*mwene omukunda*). Over time, a vigorous headman and his family may attract enough settlers to warrant a primary school, a government borehole and later on, even a shop. With the addition of each facility, the headman's status increases and his local power is consolidated.

Provision of a government borehole (*imbola* is the local term, a corruption of 'bore') is a significant shift of scale in water availability compared to hand-dug wells. As many more livestock can be watered from a single site, the productive value of grazing land surrounding a new borehole changes dramatically. This leads to changes in the management of grazing land accessible from the borehole. If a borehole has been sited in a pre-existing settlement, the village headman and his family are usually in the best position to co-opt this precious new resource. In some cases this has led to personal enrichment, as discussed below in the section

on borehole privatisation.

In sum, both the rights to allocate and to use land vary according to the type of land. Allocation privileges are hierarchically determined, following the rank of traditional authorities. Property rights over land and water which have not been delegated to lower authorities remain vested with the tribe as a whole, represented by the King. Thus the residual right to land not previously allocated lies with the central authority. The degree of exclusive control maintained by an individual depends on the function of the land. There is a gradient of exclusive rights from residence (most exclusive) through farming to grazing land (non-exclusive). This study is concerned with the re-interpretation of these rights and usages by traditional authorities and by individuals. Political and legal shifts at the national level (see Werner (1996)) have allowed a re-interpretation of customary property rights which is underpinning the contemporary movement to enclose land and privatise water sources in eastern Oshikoto region.

5.4 The enclosure of open rangeland and privatisation of boreholes

5.4.1 Enclosure of land

Customary rights to move livestock over grazing land were not constrained by any traditional authority, but only by access to water. Membership of the Ndonga tribe was sufficient for an individual to be able to take his cattle to a grazing area. Members of other tribes (particularly Kwanyama) could also graze their cattle in the study area, with permission from the Ndonga authorities. But grazing areas are only worth using if water is available. Thus rights to use a water point had to be negotiated on a reciprocal basis with the individual owning the water source. However, an exception has arisen to the principle of reciprocal access rights, in the form of fenced grazing land on which exclusive access prevails. Over the past decade or more (Holme and Kooiman 1994; Fuller *et al.* 1996; Cox in this report), large open areas of Oshikoto have been enclosed by wire fences, termed locally *ondhalate*. Enclosure of Ovambo tribal grazing land by fencing is said to have first occurred in the late 1970s (Tapscott and Hangula 1994). The precedent had already been established when the colonial government created private fenced farms in the Mangetti area within the southern portion of then Ovamboland (see Werner in this volume).

According to customary practice, as articulated by the Ndonga King and his councillors, land intended to be enclosed can only be allocated by the traditional Ndonga Council. Neither individual councillors (*elenga enene)* responsible for a traditional district nor headmen have the authority to allocate blocks of grazing land for fencing (see Figure 5.2). The procedure for obtaining permission to fence an area is described by the councillors and the King as follows. The applicant first approaches the councillor for the traditional district in which the land lies, referring to the local name by which a grazing area is known. The councillor then takes up the matter at the King's Council, which in considering the request, applies certain criteria, namely; citizenship, the character and background of the person, and whether the applicant 'already has many other grazing areas, as otherwise one person may end up with many grazing areas.' The maximum size of a parcel for which fencing is permitted is 6 km on each side (3,600 ha). The Council normally demarcates the area (details are not available on how this is done), but councillors admit that sometimes the area fenced by an individual

exceeds the allocated area.

Conflicts arise between applicants as to where boundaries should lie, and the King's council has to settle these disputes. Fees are paid by the applicant to the councillor who is in charge of the district (*oshikanjo*), but no rates could be established. Granting the right to fence does not confer inalienable ownership to the applicant. If a fence-owner wants to leave, or dies, the land reverts back to the traditional authority (as in the case of arable land), which can grant the parcel of fenced land to someone else. According to the traditional councillors this has not yet occurred. How the value of capital improvements (notably, fencing and sinking of private boreholes) would be calculated into this transfer could not be determined. Cases of transfer were encountered, however, in which one owner had transferred his fenced land to another person. No further details could be obtained. The process of land allocation, transfer between individuals and/or reversion to traditional authorities underlies the issue of transforming property rights, but is obscured by the fact that the process is not subject to public scrutiny. More lengthy field research would be required to understand this process thoroughly.

The senior traditional authorities defend this new form of property rights on several grounds, which can be summed up as redressing historical imbalances on the one hand and improving livestock husbandry and commercialisation on the other. The first justification is outlined below, while the second line of argument is discussed later in the section on commercialisation.

At the heart of the argument about redressing past injustices is a rejection of the division made by previous governments between commercial and communal land. These divisions entailed differences in the ways each type of land could be used for livestock-raising. As one senior traditional leader remarked:

> 'If we cannot get commercial farms, then we will make them in the so-called communal areas. Why should we call them 'communal areas?' Those people who are now in the commercial areas, those areas used to be communal areas.'

The implication is that double standards are being applied; other groups (European settlers) have in the past turned communal land into private ranches, but this method of farming is now denied to indigenous Namibians in the northern areas. The Ndonga traditional councillors also point out that since independence many people in the north are fencing without the permission of the tribal authorities, on the grounds that they fought for the land, that the government owns the land, that 'land is a natural thing' and that according to the Namibian Constitution, every one has the right to settle 'where he wants.'

Other traditional councillors explain that people got the idea of fencing by looking beyond the 'red line' (the veterinary cordon fence). A well-placed urban individual, representing northern farmers, remarked that: 'all communal farmers aim someday to come commercial but they can't afford to, while the red line is there.' According to this argument, the high price and relative scarcity of freehold farms for sale south of the red line justifies fencing in the northern communal areas. The only alternative for aspiring commercial farmers in the north, according to one spokesman is: 'to try and develop our small places which we have now ... this is why the fences are coming up.' Another perspective on this argument is that

acquisition of land in the communal areas is relatively cheap (involving only an application fee payable to traditional authorities), as compared to the purchase prices of freehold land in the 'commercial' areas south of the red line (Tapscott and Hangula 1994).

A parallel and related trend of fencing grazing land around villages is also occurring in Oshikoto. This trend has arisen following the installation of more government boreholes since independence. Once many non-resident herds are able to water at a new borehole, a serious repercussion for those settled around the new borehole is the depletion of pasture for their own animals. For this reason some headmen and other better-off families around a borehole have constructed private enclosures over the past 2–4 years. The enclosures are fenced with wire in order to preserve some grazing for resident livestock (including goats) against the onslaught of hundreds and even thousands of other livestock that pass daily through the village. These new grazing reserves have their basis in a traditional form of land use, known as *ekove*, in which calves, sick animals and others requiring special attention were kept in areas adjacent to the homestead, fenced in by thorn bushes (a form of fencing called *ongumbu*). Those who have raised wire fences on the routes used by cattle to reach boreholes have typically enlarged their previous areas of bush-fenced *ekove*, although they still do not compare in scale to the privatised fenced farms (*ofarama;* corruption of Afrikaans). The former have an area of only tens of hectares, as compared to the thousands of hectares contained within an *ofarama*. Nevertheless, local people comment that the smaller fenced areas began appearing after the large farms, as villagers who could afford to realised they could also claim and protect their own grazing areas.

It is clear that traditional and new elites have undertaken an intentional redefinition of customary property rights over land. They claim it is their prerogative to do so, that these new property rights are necessary for modern livestock husbandry, and that it is an avenue open to them to rectify historical injustices. They recognise and regret that not everyone can take advantage of the new form of property. Summing up on this last point, a councillor noted:

> 'We know that those who cannot afford to fence have the will but not the resources ... But people have got the idea of fencing from the commercial farms [to the south] even though the area here is small and not everyone can be accommodated.'

The outside observer has the impression that a game of bluff is being played out, in which frustrated elites are signalling to the new government that if they do not get cheap land in the commercial areas, they will take what they want in the communal areas, and challenge the government to prevent them.

5.4.2 Borehole privatisation

Under customary law, the first rights to water are assigned to the individual who develops the water source, as noted above (see also Werner's section). In the case of government-installed boreholes in eastern Oshikoto, the ownership rights were supposed to remain with the government, which undertook to maintain the boreholes. Management of new boreholes was to be delegated by the DWA to an individual resident near the borehole, who, in some way selected by families around, was to take responsibility for the borehole. This individual was

then given the key to the pump engine, and he or his designated representative given some brief instructions on operating the borehole. Since very few permanent settlements existed east of Okgumbula prior to the installation of boreholes, it is difficult to imagine how this process of selection was accomplished. It is hardly surprising that in a number of instances, disputes have arisen locally over who should be the official 'key holder' for the borehole. Thus rights of control over boreholes do not always conform to official intentions (see also Hovey (1997) for the case of Kunene).

These somewhat ambiguous circumstances have led to two forms of borehole privatisation taking place; the first by local headmen, and the second by non-resident entrepreneurs. There are several cases in eastern Oshikoto where village headmen have constructed private fences around a new borehole and begun charging other borehole users. In 1995, herders were 'chased away' from the borehole at Okatope as the local headman had started enclosing it with a fence. The same is occurring at Omtoko borehole and to a solar borehole at Omtwewashambundu. Exact charges demanded by headmen to allow others to obtain water from a newly-enclosed borehole were difficult to establish, but include payment in diesel and engine oil.

The creation of dominant (if not exclusive) property rights in such cases depends on clever social manipulation by the headman. It would not usually be in a headman's interests to block all other users – their contributions of diesel and money help to keep the borehole running, and a headman must also be seen to be socially responsible.

The second form of privatisation, of government boreholes by town-based entrepreneurs has been far more common. According to local headmen and herders in the study area, a number of government boreholes situated on open land have subsequently been enclosed, particularly since 1994. This followed the drilling of 18 boreholes under the Ovambo Water for Grazing Programme Scheme,[74] financed by government. The practice is also noted by the DWA; 'It frequently occurs that some big stock owners, often government employees informed in advance of the drilling programs, usually non resident in the concerned area, fence lands nearby the future borehole location' (DWA 1995: 46).

Today, most of the government boreholes north and south of Onamisu have been enclosed by private fencing, with the exception of one borehole and that is effectively controlled by a farm owner whose farm is adjacent to the borehole. A survey of this area in 1994 noted that most of it was 'fenced off property' (Groundwater Consultants 1994). Onamisu is an area of traditional hand-dug wells which used to be a key resource for mobile herds using the surrounding cattle posts. A herder states that;

> 'Onamisu used to be a huge area for grazing, now everywhere you look there are fences, to the east, everywhere, so there's no grazing left, only the [traditional] wells at Onamisu. To the south, there is a borehole at Oshanashamonde, which has been fenced around, and south again another

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[74] According to the report on the results, 'it was found that areas within eastern Ohangwena and Oshikoto had substantial grazing potential' and these new boreholes were to 'supply the agricultural needs of the rural population' (Groundwater Consultants 1994: Vol.1:1).

> borehole, fenced. Therefore if I go with my cattle along there I may get water but if my cattle get inside the fence I'll be hit by the people there; then I may shoot them.' [This herder was carrying a gun].

Headmen around relate that as soon as the government installed boreholes in the area some 2–3 years ago, 'everyone else cleverly rushed to fence his own farm around the borehole.' The few remaining open-access boreholes are now in the process of being 'privatised.'

A description of this process was provided by the young herders of a livestock-owner who was planning to fence an area around Oshivambe borehole, near the boundary with Okavango in an area called Emanya. The owner in question, described as a businessman who owned bottle stores and cattle, already had a ranch in the Mangetti Block. Three years ago he decided to expand his enterprise by moving some cattle north from his Mangetti farm, which was becoming over-stocked, thereby allowing room for herd growth. He brought three of his employees (the young herders) to take care of the cattle, and they relocated around the newly-constructed government borehole. Emanya had been used as a cattle post area, since it contained hand-dug wells. Once the large cattle owner's livestock moved in, the cattle post herders could no longer make use of the government borehole, which will shortly be fenced around by the businessman.

One avenue to gaining exclusive rights over a government borehole is through providing fuel, which in turn depends on availability of transport. The DWA does not provide for or pay for transporting fuel from the depot in Oshakati to the rural boreholes under its control. In some cases where boreholes have been privatised, it is possible that the fuel is still given freely by the DWA in Oshakati.[75] This is the only point in the North Central Region where the government distributes free fuel for boreholes. Some of the communities centred around open-access boreholes in eastern Oshikoto have become dependent upon the better-off private farmers for transport and it is possible that, over time, these farm-owners will gradually take over the management of a borehole, since its operation is dependent on his fuel provision.

Once privatised, boreholes provide not only a secure water supply for one's own livestock but an additional source of income as herders who previously relied on traditional wells or contributed towards the fuel costs of a communal borehole now must pay more to water their livestock from privatised boreholes. The exclusivity of access to privatised boreholes very much depends on the individual farm-owners. Some farm owners allow livestock from surrounding cattle-posts to be watered, but the herders must provide diesel – a typical rate was 25 l of diesel to water one herd of cattle for a week. Cash or livestock are also acceptable payment. Some herders cite a rate of N$100 per day to be allowed to water cattle at a private borehole while *en route* between grazing areas. Other herders note that certain boreholes have more lenient controls, where the farm employees allow neighbouring livestock-owners access to the water even if they cannot pay immediately.

One larger herd-owner, not a farm-owner, had to 'pay' one cow per season to a farm-owner

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[75] A DWA list of boreholes which receive free fuel and servicing includes a number of borehole sites north of the Mangetti Farms which have been enclosed and are being managed as private concerns by the fenced farm owners. Government-maintained boreholes are allocated one 210 l drum of diesel per month.

to be able to water his cattle at a privatised borehole. The herd-owner, a well-respected senior headman, elaborated:

> 'The government built boreholes there [in eastern Oshikoto] in 1993 and after. These were built for the community, who are supposed to pay for the cost of transporting fuel. But to get water now from these boreholes a cow must be given to those who have the key of the borehole. Those people have taken the boreholes as their own, so we have to be humble now to ask for watering at these boreholes, as they have been 'privatised' by the businessmen. Since the government made these boreholes, the businessmen just supply their own fuel and charge others for the use of the water.'

Another version of this process, given by some officials in town, is that individuals are able to buy existing wells from the Chief. When the government started a programme of borehole drilling (contracted out) in 1993, the boreholes were sited without knowledge of where these individual rights over wells pertained. Therefore when an individual who had bought the rights to a well found a borehole drilled on his well site, he fenced around the borehole and claimed it as his own. It was not possible in the field research to verify this practice of buying well-rights from the tribal authorities.

In the case of privatisation of a government borehole at Okatope, another headman recounted the following:

> 'Last year [1995] at the government borehole at Okatope, when the cattle herders arrived there they saw a notice that anyone who wants to use this borehole must provide their own diesel and engine oil. The people complained to all the nearby village headmen ... who took the matter to Okongo, to officers at Water Affairs. In any community there are rich, richer, richest; close to this borehole is a man working at the diamond mines in Oranjemund, who wants to privatise this borehole. The headmen were not successful ... if you are having a fight and your opponent has more weapons then you will lose.'

The issue of property rights over government boreholes which have been enclosed lies at the very heart of our study, but the facts of the matter are indistinct. The property rights in these cases lie within two separate jurisdictions; the traditional Ndonga council has allocated rights to fence grazing land, while many of the areas fenced contain boreholes which are government property, belonging to the DWA. This lack of overlapping property rights may be convenient for the involved parties, since each authority can claim to be acting correctly within its own jurisdiction. The traditional leaders are entitled to allocate land, and the government is entitled to install boreholes. While it is perhaps just a co-incidence when both fenced land and boreholes are associated, the possibility of collusion certainly exists.

5.4.3 Effects of enclosures

The most severe effect of the new enclosed ranches is to block access to water points and the pasture surrounding those points in the eastern portion of Oshikoto. Although fenced farms were earlier established in the southwestern part of the region, adjacent to and northwards

from the Mangetti Farms in the 1970s and 1980s (Figure 5.1), those fenced areas have not had much impact on seasonal grazing movements. This area was not favoured for grazing, due to the type of soil which will not retain water in the dry season.

The eastern part of the region is by contrast an important grazing area since in addition to good vegetation resources, there were reliable water points in the past. The soil of eastern Oshikoto is described by local herders as more red and supporting certain preferred grasses 'which make cattle fat.' Access to this zone has now been curtailed with the erection of fenced farms over the past 3–5 years, and ordinary herders find themselves with an increasingly limited choice of dry season grazing.

Fencing affects seasonal grazing in several ways. As a greater proportion of open land is enclosed, the land which remains is less and less sufficient to support the livestock population. Secondly, as water resources are expropriated through privatisation of well-sites[76] or boreholes, cattle from surrounding cattle posts or in transit have much restricted access to water. Thirdly, herd-owners are fined, or punished (some say violently) if and when their cattle stray onto fenced farms. This is a common complaint, and it is conceivable that some herders allow their cattle to encroach onto *ofarama* to eat the retained grass which is no longer available elsewhere. Fourthly, the fences are blocking access to more distant grazing areas.

As noted above, access to grazing land is largely contingent upon access to water in the dry season. In the rainy season, the relative abundance of pasture and water reduces the pressure for herders to define closely property rights. In the dry season, as often stated by herdsmen, 'it's impossible for the cattle to enjoy the grass without water.' Thus anyone, whether a village headman or a businessman having 'purchased' a parcel of land for fencing, who gains exclusive rights to a borehole can in effect limit the number of cattle grazing the vicinity simply by restricting access to the borehole. It becomes apparent that in the first instance fencing is less about grazing control than about controlling access to water.

5.4.4 Reaction to fenced farms and privatised boreholes

The combined effect of these changes is that communal area cattle either have to graze on a much smaller area of land, or else a vent must be found for the pressure resulting from enclosures. A headman summarises their dilemma thus: 'we now have very great difficulties getting grazing; there is no place now as our cattle may stray onto the *ofarama* and we cannot enter the farms to retrieve them.'

A common response has been to send cattle further east over the regional boundary and into Okavango. There the grazing land falls under the traditional jurisdiction of another tribal authority, but as one headman said: 'the villagers' land [in the study area] has no more forest [uncultivated open bush/trees] so we have to move to Okavango for grazing, although it is not our land, as our own grazing land is now occupied by these *ofarama*.'

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[76] The following well sites were said by a number of local headmen to have been enclosed and privatised over the past couple of years: Onalushetete, Elavi, Emanya, Omungu, Okatope, Okolo.

Several local headman related that peoples of eastern Oshikoto had started taking their cattle across to Okavango areas about ten years ago, but only when the rains in Oshikoto were poor. Reciprocal agreements were made between the Ovambo migrants bringing their cattle and the resident Okavango peoples. These agreements often involved Ovambo providing labour to dig deep wells, in return for being permitted to graze cattle on Okavango land. But the occasional emergency use of Kavango grazing land became a regular occurrence once the new fenced farms enclosed grazing and water in eastern Oshikoto. This release for the mounting pressure is unlikely to remain. Headmen and elders in the villages of eastern Oshikoto have been warned by the traditional leaders of Okavango that they cannot continue taking their cattle there every dry season. According to one headman:

> 'The King of Kavango is trying to chase us away as he says, 'Do we think the Kavango [people] have no cattle of their own?' He is really very annoyed and has given a strong warning that after this next rainy season, he does not want to see any hoof of Ovambo cattle in his area.'

The young men who herd the cattle moving across to Okavango also note that they are no longer welcome there, and have been told by local residents that 'they are not needed in the Kavango communities any more.' Access to the Kavango grazing areas is also being restricted by the new farms which block the east-west migration routes (see Cox's section of this report). Herders trying to take their cattle through are prevented from watering at the privatised boreholes, even if they are willing to pay, because:

> 'as so many cattle are moving eastwards to Okavango, if the farm owners allowed even one herder to use the water, everyone else would demand it. In the fenced areas to the east, the owners don't even want to see your cattle moving through so definitely you can't ask for permission to water.'

Denial of access to the Kavango grazing lands, combined with the enclosure of rangeland in eastern Oshikoto, is already having a discernable impact on the grazing land and water points that remain under communal control. Headmen complain that cattle are being squeezed between the new farms and the Okavango boundary, and liken this to an Ovambo proverb of being between two blades of a traditional double-bladed knife (referred to in the title of this paper). If you move to one side (Okavango) you will be cut by that blade, and moving to the other side (the *ofarama*) you will be cut by the other blade.

The immediate effect of this squeeze is being borne by the villages of Okengele, Omboto and Omotoko (see Figure 5.1). These villages have government-supported boreholes that still operate (in contrast to neighbouring villages where boreholes are either now privatised or have been broken for many months). The functioning boreholes are attracting all the cattle which are now blocked by fences from grazing to the south and east. This concentration of cattle onto ever-smaller open rangelands centred on communal boreholes is a backwash effect. With the former seasonal flow of cattle from west to east now largely impeded, the mass of cattle are being turned back westwards and exerting inordinate pressure on the few accessible areas remaining.

Faced with diminishing grazing resources, some local people are beginning to feel desperate. They point out that those who are making fenced farms are taking away all the grazing land. One headman says: 'the government is not looking carefully at the whole issue ... the people

are also human beings – those who make the fences now treat the people around like animals, not as though they are human.' Another headman in the affected area, whose own wells have been expropriated by one of the commercialising farmers, remarks that the fenced farms are not good for the nation, as one cattle post area can support up to 30 households, while one new *ofarama* can only support one household.

In the Onamisu area a young herder commented that:

> 'The fences are penetrating more and more, day by day, so people don't know where they are going to get grazing any more. The government should look on both sides, to think about the poor people who don't have money to make fences, and should limit the area of enclosing. People may otherwise find the fences coming around their houses and they are asked to leave.'

The people feel that they have no recourse when confronted with a fence and expropriation of land or wells. The only authorities with which the local populace are familiar are the traditional tribal leaders. As the permission to enclose is granted and upheld by these very authorities, the headmen and cattle owners point out that their complaints have little chance of redress. Another channel of appeal might be the local government (not the traditional) elected councillor for the area, who resides in Okgumbula. But according to local people, he never visits the far eastern part of Oshikoto where the fencing problem is most acute. In fact, people say that no one from the government visits their area. Others state that the local government councillor is concerned with food distribution and drought relief and is not the proper authority on matters of land. The general feeling of helplessness is summed up by one headman; 'even though local people want action about the fences, we are not part of the government, so who will answer us?'

5.5 Commercialisation – Barriers and aspirations

The movement to establish, justify and legitimise fenced ranches in Oshikoto is based on the commercial aspiration to become wealthier through the sale of cattle (see also Fuller *et al.* 1996). Those advocating commercialisation argue that, given conditions in Namibia, fencing is necessary, in addition to several other changes.

Members of the traditional Ndonga council cite the desire to increase cattle marketing as a strong impetus behind the creation of privatised fenced farms. As one senior member stated:

> 'We [livestock farmers in the north] cannot sell now to the south as we are told livestock need vaccination, but we can only vaccinate our cattle if they can be kept away from others [protected from contact with unvaccinated animals] so we need to fence.'

The new commercialising farmers are aiming in part to sell cattle to the Meatco[77] abattoir in

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[77] This is a nationally-based company, which began operations in the Northern Communal Areas in 1992, with an abattoir and office at Oshakati (Rawlinson 1994). Meatco buys cattle at periodic auctions held in rural areas, announced on the radio. Sellers in the north-central region can also bring their animals to the abattoir in Oshakati, where they will

Oshakati. Animals sold to Meatco are inspected and quarantined, so that diseased animals are rejected. To be able to meet these animal health requirements, farmers must expend cash on veterinary inputs, either directly through purchase of veterinary drugs, or indirectly through payment of transport and other costs to veterinary officials. Commercialising farmers note that fencing helps in disease control, as livestock can be inoculated or treated against certain diseases and then kept isolated from untreated herds in the remaining communal areas.

Beef from the northern communal areas of Namibia can only be exported to the southern African region, and fetches a lower price by weight than beef from south of the cordon fence, which can be exported to the EU (Leopoldt, Meatco manager, pers. com.). This is corroborated by commercial farmers living south of and adjacent to the cordon fence, who receive a lower price per kilogramme if they sell their cattle for slaughter at the Oshakati Meatco abattoir, rather than in the south (where the abattoirs are often overloaded).

Commercialising farmers who have fenced off sections of land in eastern Oshikoto give additional reasons why commercialisation requires fencing. In many cases boreholes within fenced farms were paid for by the new farmers themselves, and in the words of one traditional leader, 'if a person has suffered the budget of putting up the borehole', that person then fences to keep other animals out of his water point.

The marketing objectives and tactics of the newly commercialising farmers differ considerably from those of the smaller-scale producers on unenclosed land. The latter rarely sell to Meatco, citing lack of access and low prices (compared to the local 'bush' price), as the main reasons. Instead cattle are sold or exchanged locally, according to need. A common exchange is for mature oxen (*ehove* in Oshikwanyama; *ondumetana* in Oshindonga) to be exchanged with another farmer who wants to slaughter an animal, in return for a heifer *(ondema; endema* pl.). Oxen are acquired for slaughter at a family reunion or celebration such as marriage, or for a funeral. Farmers also sell animals to each other for cash and a farmer may sell a heifer to another farmer rather than exchange for an ox. Oxen are also sold to neighbouring fenced farms. Informants state that five-to-six year old oxen are the ideal type of animal to sell. In dire need, a farmer will sell a younger male or even a heifer. Old cows are often allowed to die of natural causes and then the meat consumed locally.

Newly-commercialising farmers, by contrast, are changing the breed composition of their herds, to produce a beef animal that is more readily accepted by Meatco, using the grading system developed for the South African market (Meatco 1996). Compared with the introduced breeds from Europe and South Africa, the Ovambo cattle develop more slowly (males only reach full weight and maturity at 5–6 years), and carry more fat at maturity. These characteristics render the Ovambo type of cattle less economic in the export market, which demands tender, younger meat with minimal fat (Leopoldt 1996 pers. com).

After setting up a new enclosure, most Oshikoto farmers begin by buying some Brahman breeding stock, or is some cases Afrikaner and Simmentaler bulls from the commercial ranches south of the cordon fence. These breeds (particularly the Afrikaner) are said to

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receive a higher price but must pay their own transport costs and arrange for quarantine. There is presently no competitor to Meatco other than the informal 'open market' for meat.

obtain the best prices at rural Meatco buying points. By comparison, some of the commercial farmers south of the veterinary cordon fence and adjacent to Oshikoto are crossing Sussex and Charolais breeds with Afrikaaner. They say that these crosses give high meat yields combined with the low proportion of fat demanded by the European market.

The newly commercialising farmers typically sell their new cross-bred animals at 2–3 years, when the meat will still be tender but sufficient weight has been gained. Cattle sold to are nearly all castrated males (*ehove*). Targeting young males for sale is one of the distinguishing features of a commercial livestock enterprise.

The semi-commercialised farmers in Oshikoto produce cattle for two separate markets. They continue to market local Ovambo cattle, but these tend to be sold onto the local slaughter market (*matara)* displayed for sale along the road, or to the so-called 'bush market.' This market gives a more profitable return than Meatco prices for Ovambo cattle, which are sold at 5–7 years when the animal has gained its maximum weight. No reliable data on prices could be obtained in the course of this study, but informants consistently cited a price differential of 6:10 of Meatco to local slaughter prices, per kilogramme, for Ovambo-type cattle. Old females *(endjindji)* are either sold to the local market or retained for home consumption by the farm labourers. The newly-commercialising farmers are thus engaging in both markets simultaneously, since they can realise a good return both on the introduced cross-bred cattle sold to Meatco and the local breed sold locally.

Commercialising farmers also buy up cattle offered for sale by small-scale producers at rural Meatco auctions. Small-scale livestock owners may sell on the spot to commercialising farmers at a lower price, rather than return home with unsold animals not accepted by Meatco buyers. The commercialising farmers then retain these animals on their fenced farms. Sometimes these animals are matured, and other times held until bulk transport can be arranged to the northern urban areas where these cattle are slaughtered for the local market. Because of the remoteness of eastern Oshikoto, and the small scale at which they operate, poorer farmers are unable to take advantage of the price premium for cattle sold in towns, where population concentrations result in high demand for meat.

5.6 Livestock husbandry on the new commercialised farms[78]

One of the hallmarks of commercial livestock production is the use of purchased inputs financed from the regular sale of livestock (Behnke 1985; Kerven 1992). The newly commercialising farmers of Oshikoto are no exception to this pattern. Management practices on the enclosed farms differ considerably from the surrounding smaller-scale farmers using open rangelands. The differences encompass all aspects of production; grazing management, use of veterinary and feed inputs, breeds kept, labour use and management of water resources. Overall, fenced farm owners are able to sink more cash into their livestock enterprises, and are thus more able to commercialise. To what extent this investment is yielding a greater return compared to the more traditional livestock husbandry systems,

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[78] Interviews were conducted on the management practices of 8 different farm owners. Five of these interviews were carried out at the farms, with farm workers and employed relatives of the owners.

cannot be quantified here. Assessment of the differences in output and the relative costs/benefits between the two types of management would require a more lengthy field survey than was possible in this research project.

5.6.1 Grazing management

Livestock on the fenced farms are not herded over long distances (in contrast to cattle kept outside the fences) but remain stable, generally being confined to the fenced areas or occasionally being let out on a daily basis to graze the nearby areas. A minority of farms have been divided into grazing camps (paddocks), with mature cows and selected bulls kept together in one camp, immatures and oxen kept in another, and being rotating to ungrazed paddocks in turn.

Based on casual visual assessment, at the end of the dry season (October 1996) there were large areas of tall standing grass in some of the paddocks, kept as a reserve. In contrast, the unenclosed rangelands appeared fairly uniformly grazed down within 10–15 km of each borehole, and it is only at the furthest points from boreholes that tall standing grass was still visible. Moreover, at that season, cattle and small stock could be frequently observed browsing leaves and seed pods from woody plants. Dry grass, however tall, has little nutritative value after flowering in the dry season. New farm owners cite the retention of grass inside the enclosures as one of their justifications for fencing, but they place greater emphasis on the need to fence in order to control breeding and protect their stock from diseases, as already noted.

5.6.2 Use of veterinary inputs

One of the principal recurrent inputs bought by the newly commercialising farmers are veterinary drugs, in addition to expending cash for veterinary services. In this respect, as in others, the owners of fenced ranches are pursuing a markedly different form of livestock husbandry than that practised by livestock-owners outside the fences. Although the details provided below and in Box 1 may only be of interest to local authorities, the general picture which emerges is that of a new group of farmers in the north trying to emulate practices on the commercial ranches south of the veterinary cordon fence in Namibia.

The newly commercialising farmers of Oshikoto are particularly concerned about the prevalence of CBPP, and complain that the Veterinary Department is not doing enough about this. As one commercial farm owner remarked: 'the main disease here in the north is CBPP but the government doesn't want to improve the veterinary system here as they are only still vaccinating against foot-and-mouth, which is not a problem on our farms.' According to the Veterinary Department in Ondangwa, the annual vaccination campaign against CBPP should cover all Oshikoto. The CBPP vaccine has not been used for the past year, however (Francois Blanc, pers. com). Herders east of Okgumbula consistently state that they never see anyone from the Veterinary Department in that area and their cattle are not vaccinated. Only on some of the new fenced farms did the resident workers or owners say that someone from the Veterinary Department was brought by the owner to vaccinate the cattle. The Veterinary Department has also been accused of keeping insufficient drugs, obliging

individual farmers to buy veterinary drugs commercially at higher prices from local private pharmacies which have stockpiled these drugs.

The way in which veterinary drugs are being used by the new commercial farmers is not necessarily beneficial. Senior staff at the government veterinary department strongly advise against treating CBPP with antibiotics, yet every commercial farm worker interviewed was doing exactly that. As noted, some commercial farmers were also buying vaccines at local pharmacies, to be administered by their employees at the farms. However, the efficacy of these vaccines is highly dubious, given that the drugs were being kept for several months with no refrigeration at the cattle posts.

Box 2 Veterinary approaches on newly commercialised farms

The main kinds of drugs used by new commercial farmers are antibiotics. Various forms of terramycin are used to treat CBPP (Contagious bovine pleuro-pneumonia), against veterinary advice, and these vaccines are also used to treat black quarter and botulism. These three diseases are widely recognised by ordinary livestock farmers as well as by employees on the fenced farms. The local name for black quarter is *okawinu,* while botulism is *oshinambunda* and CBPP is called *epunga.*

Okawinu (black quarter) is described as a swelling of the limbs and a gland at the joint under the leg. Some herders believe there is no treatment for this disease, while others claim that terramycin is effective. On some of the new farms, the black quarter vaccine was being used. This vaccine is bought from pharmacies in Ondangwa or Oshakati (price N$ 28.00 per bottle), and the farm workers who use it vaccinate the cattle every two months.

Oshinambunda (botulism) is described as causing shaky legs and paralysis of the back. This is regarded as a serious threat and some herders say there is no treatment; once contracted they expect the animal to die from this disease.

According to all livestock-owners interviewed in Oshikoto, *epunga* (CBPP) is quite widespread. Only in one case did farm employees say that vaccine was given to prevent this disease, and this was carried out by the employees rather than Veterinary Department staff. The symptoms of *epunga* are described as initially coughing, listlessness and swelling of the chest. If spotted quickly and treated (with terramycin-type antibiotics), some farm employees say that recovery rates are good. Other employees say there is no treatment for *epunga.* If an animal is suspected to have died from this disease, herders immediately inspect the lungs upon slaughtering, which stick to the ribs in the case of *epunga.*

Veterinary intervention is one of the distinguishing features of the new more commercially-oriented management associated with fencing, in comparison with small-scale livestock management practices outside the fences. The newly-commercialising farmers are clearly choosing to invest (sometimes misguidedly) in a package of improved management, rather than only trying to appropriate land and water resources. The conventional portrayal of those engaged in fencing in the north has not necessarily highlighted this point (*e.g.* Fuller *et al.* 1996; Tascott and Hangula 1994 and various articles in the national press).

5.6.3 Breeding practices

The introduction of exotic cattle breeds to the Ovambo area has already been discussed in the section on commercialisation. Herders and owners on the new farms remark that these new breeds of cattle and goats all require more feed and water in the dry season, compared to the indigenous Ovambo livestock (confirmed by research in Namibia; see Rawlinson (1994)). As one farm owner phrased it: 'the Ovambo animal takes care of himself ... You just open the gate [of the kraal] in the morning and he goes, and he's still fat.' By contrast, herders note that the new breeds such as Afrikaner and Brahman are 'good in their body in the rainy season, but reduce their body size more than the Ovambo cattle in the dry season.' The Simmentaler cattle are also said to prosper provided fodder and water are close at hand, but do not take well to walking long distances.

Despite the greater input and labour costs associated with the exotic breeds, their marketability ensures that new farm owners are still keen to introduce them. It is the need to prevent random mating between exotic stock and local cattle that new farm owners often cite as a reason for fencing their land.

5.6.4 Use of other purchased inputs

The newly-commercialising farmers buy supplements for their cattle on the enclosed farms. Vitamin supplements were not used on all farms and were usually only given to the exotic breeds before the dry season, 'to make them strong', as well as to any weak Ovambo cattle. Salt licks were used on all the farms contacted.

A few of the farms occasionally used supplementary fodder – lucerne bought from the commercial farmers' cooperative (Agra) in Tsumeb. The resident herders would give lucerne to any animal which looked weak or tired, with preference being given to calves. Although herders all acknowledged that the exotic breeds got thinner and more hungry than the local Ovambo cattle in the dry season, additional feed was not selectively fed to the new breeds. Nor was any preference given according to an animal's age or sex.

By comparison, several commercial farmers immediately south of Oshikoto on the other side of the veterinary cordon fence were feeding their bulls and small stock a homemade feed concentrate every day, and giving a survival ration of 0.5 kg of concentrate daily to the rest of the cattle. Small-scale farmers in eastern Oshikoto never purchase feed or mineral supplements, nor is there any market for the grain stubble on fields which is grazed by village cattle after the harvest. There would be interest among the commercialising farmers north of the cordon fence to learn the low-cost and low-technology methods of processing local vegetation (branches, leaves and seed pods) into cattle feed which have been pioneered in the south. Such techniques might also be feasible at a village scale for small-scale livestock farmers.

5.6.5 Labour used

Each new fenced farm has between two and five resident young men, managing the livestock on a year-round basis. These men may be employees, brothers or nephews of the owner(s).

They may receive a small monthly wage, and are provided with mealiemeal when the owners drive out to their farms. The herders are also allowed to consume milk from the cattle during the rainy season, and to eat animals which die from natural causes. Their main duties are watering the animals and managing the privatised boreholes, including negotiating with other herders who wish to water their cattle. Some herding is necessary when the livestock stray away from the enclosures in search of fresh grass. Long-distance herding is not, however, part of their job as the livestock stay in or around the enclosures all year. Farm employees also diagnose and treat sick animals, as noted above.

Village headmen near to the new farms assert that many employees on these farms are Angolans, who cause problems locally as they are armed and can return to Angola after raiding local cattle. Other senior headmen stated that this is less of a problem than it used to be, due to increased government control.

5.6.6 Management of boreholes

Almost all the fenced farms contain a borehole. These have in some cases been paid for by the owners, and in other cases, privatised (see section on borehole privatisation). Whether the control of a borehole is *de facto* or *de jure*, it nevertheless confers a major advantage in livestock management, since one's own livestock can be watered as often as needed and do not have to either walk or wait to be watered, in contrast to the mobile herds managed by small-scale livestock farmers.

The principal inputs which a borehole requires are diesel and engine oil. One of the main responsibilities of the absentee farm owners is to ensure that their farms have a regular supply of fuel so that the boreholes keep running. There are no local sources of fuel near the farms, so that all supplies must come from Oshakati, Ondangwa or Okongo to the north, a minimum eight hour round-trip by vehicle. Okongo does not have a commercial fuel supplier nor a DWA depot for free borehole diesel. But it is significantly nearer than Oshakati to the boreholes of eastern Oshikoto, and is therefore the first choice to obtain fuel for this area. Farm owners transport one or two 200 l drums of fuel per trip, which last 1–2 months in the dry season.

Arrangements between farm-owners regarding the use of privatised boreholes vary. In one reciprocal form, neighbouring farm owners allow each other's livestock access to their boreholes, since pumps or engines frequently break down but livestock must continue to be watered. A more formalised arrangement is described as a 'shift system', whereby each farm supplies diesel for several days' watering, and the animals from both farms are watered at one borehole.

5.7 Costs versus benefits of privatisation

There are clear differences in the way livestock, rangeland and water resources are being managed within and outside the new fenced ranches of eastern Oshikoto. Although some observers see the fences as a land grab, on closer inspection the process is more deliberate. Some of these differences in management have been described in this paper. The significance of these differences are assessed in terms of three criteria: changes in

productivity; and impacts on social equity and natural resource management.

5.7.1 Productivity

Proponents of fencing, within Oshikoto and elsewhere, take as a foundation of their argument that fenced extensive livestock management increases output (see Werner in this report for the case of Oshikoto). Adams and Werner (1990) point out that at least at the time of independence for Namibia, a view persisted among agronomists and government officials that communal farming was associated with low productivity. The belief that traditional methods were not geared to free market conditions was stated, for example in the National Development Strategy for 1985. In this view, tenure systems are seen as precluding the implementation of pasture conservation, and official attempts to bring stocking rates in line with carrying capacities. (Similar concepts underlay fencing schemes imposed on pastoral areas at the same time in South Africa; see Boonzaaier 1987). The communal methods of livestock rearing were seen as linked to a reluctance to sell cattle commercially. The conceptualization of communal agricultural as less productive was the rationale for an emphasis on transformation to commercial agriculture, in the former Administration.

According to agricultural planners and politicians who subscribed to this viewpoint, the best way to change the communal farming system was to fence off communal land into camps and 'economic units', to facilitate rotational grazing and gradual improvement of pastures (Adams and Werner 1990). In Namibia, the proposition has not yet been subjected to empirical testing (Werner 1996), although it continues to underpin much opinion about the relative productivity of communal versus freehold tenure areas (*e.g.* IFAD 1994; Lepen n.d.; Rawlinson 1994).

One of the main arguments in favour of private ownership is that it leads to greater capital investment and protection of the land, resulting in a higher yield. This position has been the subject of much controversy and some empirical investigation (see arguments and data summarised in Behnke and Abel (1997)). To gain information on this question in Namibia, a future study should compare the economic and biological costs and returns of three types of livestock management now being practised side-by-side under similar ecological conditions: open-range mobile livestock husbandry, newly-commercialising livestock husbandry on enclosed land north of the veterinary cordon, and lastly, established commercial livestock ranches just south of the veterinary cordon.

Fencing itself does not constitute a major shift in production system. When common land is fenced in without other changes being made, it is usually for defensive rather than productive reasons. But as this paper has documented, those fencing large areas of the commons in eastern Oshikoto are embarking on a different form of livestock management to that practised by their neighbours outside the fences. When the factors of production are altered under fenced livestock husbandry, this signifies a real change in commercial orientation. But some evidence suggests (a number of African cases discussed in Behnke and Abel (1997)) that this shift to commercialisation does not result in higher output per unit of land. There is a much higher rate of capital investment associated with the transition to privatised ranching, and the form of output changes from multiple use values - milk, meat and draught power - to a single commodity; usually meat. But the lower stocking rates and other changes accompanying this

shift all tend to lower the output *per area* when compared to traditional open-range pastoral systems.

There are two direct consequences of this changing equation. Firstly, producing an equivalent amount of energy in a commercial commodity compared to a subsistence product is more costly. This cost is usually through substituting human labour by mechanical energy, fossil fuel and industrial inputs (such as wire fencing). Secondly, fewer people can be supported on the same area of land under commercial forms of production, since the volume of output is lowered and the stocking rate reduced. For the individual producer making this shift to commercial production, these drawbacks are outweighed by the higher margin of return over production costs, provided there is a sufficient market demand for the commodity. *Thus, privatised commercial ranching is a more profitable but less productive use of the land.* The immediate benefits of commercialising land will accrue only to a few, and many former producers will have to find alternative livelihoods.

5.7.2 Equity

Most of the commentators on the fencing in eastern Oshikoto conclude that this process is inequitable. Underlying this view is the notion of finite resources – that if some people gain exclusive access to a portion of these resources, there will be less for others. It has been argued here that the most limited resource in the study area is not land but dry-season water. As is clear from Werner's discussion in this report, prior to the installation of boreholes, the land was mostly used only as a seasonal grazing resource. Permanent water sources now allow the land to be grazed on a year-round basis. To the extent that traditional wells and government boreholes are being expropriated by individuals, and *no new* water points are being created, privatisation does lead to greater inequality between producers. Denied access to water for their animals, the usefulness of open range vegetation is much reduced for livestock-keepers outside the fences. This point is well-recognised in another study on enclosures in the same area; 'In effect the grazing in more distant 'corridors' [between new fenced farms] can cease to exist in the mind of a pastoral farmer if it is beyond the distance cattle can trek without water' (Fuller *et al.* 1996: 13).

One way to help restore a more equitable balance would be to expand the number of dry season water points in the remaining open range, and to ensure that these were not expropriated in the future. There is still under-used grazing land in eastern Oshikoto and in neighbouring regions (see Cox's section). Underutilised land is located, not surprisingly, in areas without dry season water sources. With appropriate development of water sources, these areas could be made available to herders now denied access to grazing land elsewhere through privatisation of water points. In light of the recent history of borehole privatisation, it would be imprudent both from the perspectives of equity and resource conservation (see below) to provide more diesel-driven boreholes in the presently under-grazed areas. Boreholes tend to attract not only large numbers of cattle, but some avaricious farmers (both local and non-local). A better option might be to encourage and materially assist local family groups to construct small-scale water points such as cisterns, small earth dams, improved wells, *etc.* This strategy would not only provide some restitution to local people who have already lost access to water points, but could impede privatisation through establishing first rights to any new water points by a visible public effort.

Questions about the equity of privatisation occurring in eastern Oshikoto also depend on who can expect to benefit from any [presumed] increased output per animal associated with more commercial management practices. Only a minority of land-users in the study area can afford to create ranches by fencing the open range. Therefore the situation appears very inequitable in that the option of increasing incomes through commercialisation is blocked for most people. But commercialisation does not necessarily demand individual property rights, and ranches are not the only path (and some would argue not always the best means) to commercialisation. There are many instances in other parts of Africa where traditional pastoralists have re-configured their production systems towards new markets for livestock products, in response to demand, and become commercialised without simultaneously alienating communal land (Kerven 1992, 1994).

The needs of those livestock-keepers who are left outside the fenced ranches would be much better served by improving opportunities for commercialisation than by further decrying the inequities of fencing. As the newly-commercialising farmers of Oshikoto all point out, successful participation in the profitable Namibian meat industry depends on having disease-free animals, of the right breed mix, receiving some feed and mineral supplementation, plenty of water and access to markets. These desiderata are beyond the means of most ordinary livestock-farmers in Oshikoto, but could all be achieved without fencing, although not without assistance from other quarters.

The lack of northern livestock farmers' participation in the formal market in the past may be due to the lack of marketing services and credit in communal areas compared to commercial (Adams and Werner 1990). In the pre-independence period only 5% of the Department of Agriculture budget was allocated to communal areas. The risk of reoccurrence Foot and Mouth disease and the prevalence of CBPP continues to hamper the full-scale participation of *all* northern livestock farmers into the lucrative cattle market (KPMG 1993; Rawlinson 1994). Addressing these constraints would greatly assist all livestock farmers, both in fenced and on unfenced land, to market their livestock more profitably, and would go some way to restoring equity between groups.

5.7.3 Sustainable natural resource management

There is a widely-held notion that the rangelands of former Ovamboland are severely overgrazed. According to Hangula (1995) rangelands in the Ovambo regions 'have to a large extent disappeared; overgrazing is still escalating ...' He considers two factors responsible; population growth and fencing of rangelands, which has necessitated 'massive livestock concentrations in certain areas, hence overgrazing, soil erosion, and general environmental degradation from which a much-needed recovery may not be possible' (p.10). Similar conclusions are drawn by Rawlinson (1994), and by external agencies (IFAD 1994), despite the absence of any long-term scientific data for the region which might substantiate these conclusions.

Against this very pessimistic view is the observation that grazing pressure (and thus possible damage) varies greatly throughout the region, from a high of 1 Livestock Unit (LSU) 3.5 ha^{-1} in the central flood plain zone to 1 LSU 13.6 ha^{-1} in the 'peripheral zones' (Tapscott (1990: 15), citing Soini (1981)). Eastern Oshikoto is very much in the peripheral zone, with a

human population density of less than 3 sq km^{-1} (DWA 1995).

The relatively low average stocking levels of Eastern Oshikoto should not be a cause complacency, however. Haphazard siting of boreholes over the past decade, financed by donors, government and/or individuals, has in some cases led to over-concentration of livestock around boreholes. This is shown by excellent mapping by DWA staff in 1995, covering the northern part of this study area, where boreholes were frequently sited less than the recommended distance of 20 km apart. That report concluded: 'in terms of grazing requirements ... [the area] is over equipped with boreholes ... hence with negative environmental impact' (DWA 1995: 46). Evidence that borehole siting is not controlled in this region comes from field reports of finding new boreholes, often private, which the DWA did not appear to have recorded (see Ground Water Consultants 1994).

Overgrazing cannot occur without available stock water, in the environment of the study area. The definition of 'overgrazing' is the subject of much discussion (see for example Behnke and Abel (1997) and works reviewed in Cousins (1996) applicable to South Africa), as is the question of whether overgrazing leads to permanent land degradation. 'Overgrazing' is used here to describe a situation recognised by local livestock-keepers when a temporary or permanent shortage of natural forage for livestock is caused by many animals grazing an area over a period of time. By this definition, overgrazing is occurring around some public-access boreholes, when one of two conditions apply: boreholes are either too close together or too far apart. When boreholes are too close to each other, there is an imbalance between the number of livestock which are able to be watered and the amount of pasture land available in the borehole vicinity. The data available from DWA for the northern part of the study area suggests that in some instances private boreholes may be situated too near to government boreholes, while new donor projects are providing funds for installation of government boreholes in areas which already have a high concentration of private boreholes.

When boreholes are widely separated, herders are unable to spread their livestock evenly over the land, as they must keep their cattle within walking distance of water. The result is that rangeland far from a borehole is under-used, while that closer to a borehole may be over-used. The creation of fenced farms together with the privatisation of boreholes has meant that livestock must walk longer distances to reach the remaining accessible boreholes. This has led to a build-up of grazing pressure around accessible borehole, setting up a wave of reaction by those resident at the boreholes, who have subsequently placed protective fencing around the open-access borehole and privatised the nearby grazing land. The effect is to further reduce access to water for non-resident cattle, which must then be moved onto other, still open-access boreholes.

The ripple effect originating from the restriction of boreholes and grazing land through large-scale enclosure is inducing some communal farmers to more closely define their own property rights in relation to water and grazing land. A similar process has been noted in the Okakarara communal area in eastern Namibia, where private fencing of land by large-scale absentee farmers has led some members of local communities to erect 'defensive fencing' around the remaining communal land (Fuller and Turner 1995). This response is, of course, a form of indigenous range management – so often claimed by outsiders to be lacking, and said to be necessary to prevent rangeland degradation (see for example IFAD (1994), concerning the Northern Livestock Development Programme in Namibia). Here it seems that

some local people have spontaneously decided to control more strictly access to natural resources (land and vegetation) and to man-made resources (boreholes). This decision is due to the threat perceived in the first instance not to the environment but to an important source of their livelihood – keeping livestock.

It is typically headmen, not whole communities, who have taken these steps to protect their assets. The introduction of a new form of property rights, consisting of large-scale fencing and borehole privatisation, has led bolder, better-off and more socially-secure local individuals to review their own rights and losses. In the absence of external (*i.e.* government) intervention, the local response has been to re-interpret property rights on a smaller scale, by restricting access to hitherto communal resources. Both private (exclusive) and communal forms of range and water property rights now co-exist uneasily in an unstable situation. Whether this evolution of natural resource management is sustainable bears close inspection over the next few years. In the meantime, it is worth reflecting that when the oft-advocated range management improvements – closer control and fencing – are undertaken, in this case by both small and large-scale farmers, the problem simply shifts elsewhere. For every ranch created by an absentee farmer and every defensive fence erected by a local headman, someone else's livestock have to find their food and water elsewhere. This is the greatest challenge now facing the communities and those who wish to assist them.

Enclosure of the commons has many historical precedents and few industrial nations have not been subject to this process. Enclosure, for some, evokes a sense that the people's rights have been betrayed, while for others it represents a powerful mechanism for reforming antiquated land use systems while providing a unique opportunity for a few to enrich themselves. Not many people would disagree, however, that enclosure initially produces big winners and big losers. Whether the losses can be justified depends in part on the depth of the historical time through which the process is judged. The people now engaged in the struggle over land rights in Namibia do not have this luxury. Nor can this research provide many answers. One of the measures by which enclosure may be judged is whether enclosing the land leads to any real increase in output. Can a given area of land produce more, and more efficiently (and by implication support more people) whether privately owned and enclosed, or communally-owned? Not an easy question to answer. The acquisition of evidence to answer this question would require longer research over a period of at least several years. But we can look to studies conducted elsewhere in similar environments (summarised in Behnke and Abel, 1997). These studies tend to show that range enclosure reduces the total output from livestock per land area, *but* that this diminished output is shared between much fewer people who are thus better-off. If true, the policy choices are quite clear; either a minority of people can be permitted to greatly increase their income from the range, while the majority must look elsewhere for their livelihoods, or else the same number of people can be supported on the rangelands but no one can look forward to getting rich quickly.

APPENDIX 1

DETAILS OF RESEARCH SOURCES AND KEY INFORMANTS

Carol Kerven

Key Informants

Discussions were held with the following key informants, in addition to individual and group interviews at the research sites.

King Eliphas Kaluma, (Ndonga tribal leader), Ondangwa
Peter Kaluma, Senior Councillor to the King
Tarah Imbili, Senior Councillor to the King
Mathieus Ngipunya, Senior Headman under Wilpard Mwandinge
Dr. Francois Blanc, NOLIDEP Regional Co-ordinator, Ongewdiva
Dr. Edwin Muradzikwa, State Veterinarian, North Central
Ben Namwandi, Chief Animal Health Inspector, Ondangwa
Magdalena Haludilu, Agricultural Extension Technician, Ondangwa
Headmen of the following villages:
Okgumbula, Oshangwe, Ongodi, Ayenda, Okangele,
Omboto, Omutoko, Okanua, Onalusheshete, Oshanashedila
Valde Sheyavali, Councillor for Engodi Constituency, Okgumbula
Mr. Leopoldt, Manager of Meatco, Oshakati
Gert Sachsenheim, livestock farmer south of veternary cordon fence, Oshivelo
Mr. du Plessis, livestock farmer south of veterinary cordon fence, Oshivelo
Epafras Awala, Chairman of Omahangu Farmers Union (Four Northern Regions) Ondangwa
Gabriel Shihepo, President, Namibia National Farmers Union, Ongwediva
Mr. Rostami, Department of Water Affairs, Oshakati
Kathingo Shikwa, Department of Water Affairs, Oshakati
Isaac Ashipala, Department of Water Affairs, Windhoek
Dr. Ben Fuller, Social Sciences Division, University of Namibia, Windhoek
Dr. Chris Tapscott, University of Western Cape, Cape Town

Wolfgang Werner

Key Informants

King Eliphas Kauluma of Ndonga
Peter Kauluma, Senior Councillor to the King, Ondangwa
Tara Imbili, Secretary Ondonga Tribal Authority, Ondangwa
Gabriel Shihepo, President, Namibia National Farmers Union, Ongwediva

Denis Nandi, Ministry of Education and Culture, Ondangwa West
Pater Kalangula, Farmer and retired politician, Ondangwa
King Taapopi, Tsandi
Oswald Shivute, Journalist, Oshakati
Dr. Nambala, Oniipa
Mr. Auala, OMAFA

National Archive materials

Native Affairs Ovamboland (NAO)

Vol.9	2/12	Tribal Customs, 1992–1938
	5/1/1	Native Affairs. Ondonga Tribal Affairs 1936–1941
Vol.10	5/7/1	Uukuanyama Tribal Affairs 1936–1943
Vol.21	11/1	Monthly and Annual Reports 1944
		Monthly and Annual Reports 1945
		Monthly and Annual Reports 1946
Vol.51	3/1	Tribal Affairs: Uukuanyama area 1948–1955
	3/2	Tribal Affairs: Ondonga Area 1947–1955
	3/11	General Policy of Administration 1948–1955
Vol.71	32/7	Native Customs and practices. General 11.4.47–7.9.53

Ovamboland Agriculture (OVA)

Vol.40	6/4/1–7	Landbou organisasies, 1971–1974
	6/5/1–7	Landbou navorsing en opnames, 1971–1974
	L6/5/2	Landbou navorsing en opnames, 1971–1974
	6/5/3–7	Landbou navorsing en opnames, 1972–1974
Vol.43	6/6/5/4 (v 43)	Bodemopnames, 1976
	6/5/1 (v 43)	Weidingstoestande, 1977
	6/6/1–7 (v 43)	Beleid bestessing (*sic*) en opdragte, 1972–1974
Vol.45	6/8/1–7	Bodembeplanning Bewaring Hersiening, 1971–1973
	6/8/1–7	Bodembeplanning Bewaring Hersiening, 1973–1974
	6/8/1–7	Korrespondensie, 1974–1976
Vol.46	6/8/1/2–7	Streekbeplanning, 1974
Vol.47	6/8/2/1–7	Oostelike Oukwanyama, 1971–1974
	6/8/23–7	Manghetti beplanning, 1973
	6/8/23–7	Manghetti beplanning, 1973–1974
	6/8/2/4–7	Verbeteringsgebied Uukwaluudhi, 1971–1974
Vol.49	6/8/4/1–7	Beplanningskomitee, 1971–1973
	6/8/4/1–7	Beplanningskomitee, 1973–1974
	6/9/1	Landbou statistiek, 1969–1982

	6/10/2–7	Beleid, beslissings en opdragte, 1971–1974
Vol.51	6/17	Weidingsbeheer, 1975–1980
	L6/17/1	Beleid, beslissings en opdragte, 1969
	6/17/2	Weidingsbeheer, 1971–1974
Vol.53	6/18/3–7	Oprigting van buite heinings, 1972–1974

Accessions

A450	Vol.7 2/18	Annual Report 1926
		Annual Report 1935
		Annual Report 1937
		Annual Report 1938
		Annual Report 1939
		Annual Report 1940
		Annual Report 1941
		Annual Report 1942
		Annual Report 1943
Vol.9 2/38		Typed ms of sections of the Tribal Customs of he Ovambo, n.d.

Government Publications (AP)

6/3	Verbatim Reports of the Ovambo Legislative Council
6/3/1	Third Session – First Legislative Council 16.3.1970–25.3.1970
	Sixth Session – First Legislative Council 9.4.1973–26.4.1973
6/3/2	First Session – Second Legislative Council 3.10.1973–17.10.1973
6/3/3	Second Session – Second Legislative Council 7.6.1974–25.6.1974
	First Session – Third Legislative Council 13.5.197–9.6.1975
6/3/4	Second Session – Third Legislative Council 20.4.1976–18.5.1976
	Third Session – Third Legislative Council 12.4.1977–11.5.1977
6/3/5	Third Session – Third Legislative Council 13–14.2.1978
	Fourth Session – Third Legislative Council 17.4.1978–3.5.1978
	Fifth Session – Third Legislative Council 13.2.1979
	Fifth Session – Third Legislative Council 17.4.1979–23.4.1979
	Sixth Session – Third Legislative Council 20.5.1980–26.5.1980

APPENDIX 2

WORKSHOP ON PRIVATE GRAZING ENCLOSURES IN EASTERN OSHIKOTO
APRIL 29 1997

ROY BEHNKE

Introduction

A day-long workshop on the private enclosure of communal rangeland was held at the Punyu International Hotel, Ondangwa, on April 29 1997. The workshop was organised by NOLIDEP, the Northern Regions Livestock Development Project, to present the results of a study on private enclosures in eastern Oshikoto conducted by the Overseas Development Institute (ODI) and the Namibian Economic and Policy Research Unit (NEPRU). The workshop was largely funded by the ODA's Livestock Production Programme, as part of the ODI project 'Privatisation of Rangeland Resources in Namibia.' NOLIDEP would like to thank Dr. Wolfgang Werner, NEPRU, and Dr. Carol Kerven, ODI, who attended the workshop and presented summaries of the work carried out by their institutes. We also acknowledge the assistance of Gotpen Hamwenye and Helen Amoomo of SARDEP, the Sustainable Animal and Range Development Programme, and from Ben Namwandi of the Directorate of Veterinary Services in the North Central Division.

The workshop was attended by about 50 people mostly representing interested parties in NCD involved in using communal land, privately enclosing that land, or attempting to administer or regulate the enclosure process. The workshop was attended by about ten headmen and women representing villages affected by enclosure, by government Councillors for the affected areas, representatives of the Ndonga Traditional Authorities, enclosure owners and representatives of farmers co-operatives and unions, and staff from MAWRD (the Ministry of Agriculture, Water and Rural Development) and MLRR (the Ministry of Lands, Resettlement and Reconstruction).

Debate at the workshop focused on several issues which are presented below. The following notes attempt to represent the diverse points of view expressed at the workshop, but do not identify individual contributions by different speakers or follow the order of the debate.

The Impact of Private Enclosures on Communal Area Residents and Livestock Owners

Local headmen and women uniformly emphasised the negative effects of private enclosures on the welfare of the owners of small herds using communal grazing lands and public water points. Loss of customary grazing areas and watering points had resulted in increased livestock deaths, crowding in the remaining open areas, tensions between rural residents and enclosure owners and employees, and the forced movement of Oshikoto herders and their livestock to areas outside Oshikoto Region. Whatever the benefits of enclosures for their owners, it was generally accepted that enclosure created numerous problems for those still trying to maintain themselves in communal grazing areas.

Aside from private fencing and the private appropriation of publicly constructed watering points, the residents of eastern Oshikoto cited the remoteness of their area and the absence of government services - such as clinics and schools - as major problems.

The Relationship between Traditional and Government Authorities

Workshop participants discussed both the historical and current relationship between the Traditional Authorities and Government with respect to land allocation. Various and sometimes conflicting interpretations were put forward. There was general agreement, however, that further guidance from senior government authorities was required, and that no one at the meeting could speak with complete authority on this issue.

Some speakers asserted that the traditional authorities were clearly subordinate to the government officials responsible for land issues. Others argued that the relationship was not so clear-cut. One important piece of legislation, the 1936 Land and Trust Act, was not implemented in Namibia until the late 1960s, and well into the 1980s had not been tested in any legal case. The legal status of the Act in Namibia was therefore in doubt, as was its correct interpretation, especially with respect to grazing land. The Act explicitly gave Traditional Authorities certain rights to regulate the use of arable land, but it did not mention grazing land and its intentions in this area remain unclear.

Other speakers were concerned more with public perceptions rather than the precise legal status of communal land law. As far as the public was concerned, the Traditional Authorities were responsible for land allocation during the colonial period. Especially if farmers paid fees to the Traditional Authorities for land rights, farmers thought that they had acted correctly and that their rights were secure. After Independence, however, people became unsure of the relationship between Traditional and Government officials - where the authority of one ended and the other began. Government officials worked according to written law which was unfamiliar to the general public. Traditional Authorities, on the other hand, operated in terms of customary procedures which were generally understood by the public, but of uncertain legality. The relationship between customary procedure and written law needed clarification and the public needed to be informed.

It was noted that the President declared to Traditional Authorities a moratorium on fencing on March 14 1997. Provided it followed correct procedures, private fencing before that date may be legal, but fencing more than 10 ha after that date is not allowed and will be opposed by the Traditional Authorities.

Questions were also asked about the relationship between Traditional Authorities and Government according to the latest draft of the new Communal Land Bill, which is now under consultation. Unfortunately, representatives of the Ministry of Lands at the workshop were not personally involved with the Communal Land Bill, and felt unqualified to speak on this topic.

In sum, the position of Traditional and Government authorities over land remained unclear - in the past, present and the future. The uncertainty and the diverse opinions expressed at the workshop point to the need for further consultations between the relevant government authorities and the public on this issue.

The Private Control of Boreholes Constructed at Government Expense

The control of government water installations by private individuals was generally condemned. But it was also generally agreed to have happened. One of the research reports submitted to the workshop named boreholes which had allegedly been taken over in this way. Consultancy

reports commissioned by the Department of Water Affairs and examined by the researchers in the course of their study cited further examples. In the workshop a representative of DRWS asked for the names of government water points that had been taken over by individuals; a representative of the Ndonga Traditional Authorities named two such locations and offered to provide information on the fees that livestock owners had to pay to use these water points.

A Local Government Councillor agreed that individuals were using government boreholes to enrich themselves, and called upon the Traditional Authorities to work with him to put an end to the abuse. He suggested that these boreholes be brought back under community control, managed by a water point committee with the means to collect fees to pay for diesel supplies.

The research team acknowledged the assistance they had received from the Department of Water Affairs in both Oshakati and Windhoek in locating information on boreholes. They had initially hoped to compile a comprehensive picture of the water situation in the study area, but this had not been possible. Sources did not always agree with one another, sometimes a report referred only to a particular drilling programme at a particular time, lists were out of date, did not contain information on private boreholes, or precise co-ordinates were not given for installations. Putting all sources of information together into a master list of boreholes and field checking the accuracy of this list would be a large task. Constructing an accurate list of installations and making this list available to the public would be an important step both towards effectively planning future drilling and controlling borehole abuse in the Region.

Oshikoto and Okavango Regions

Many herders from Oshikoto were taking their animals into Okavango to find grazing and water. Lately this migration had caused conflict and concern.

Headmen emphasised that Oshikoto stock owners do not migrate to Okavango out of choice - they had been forced out of Oshikoto by the enclosure of their customary grazing areas and water points, and by the privatisation of government boreholes. The movement into Okavango occurred in the following way. Often, herders from Oshikoto moved into Okavango without seeking permission from the traditional authorities in the area, and constructed hand-dug wells. Okavango herders who did not know how to dig these wells and needed water would soon come to share the water with the Oshikoto migrants, and a relationship would develop. Afterwards, as ever more people kept arriving from the west, conflicts arose. It was at this point that Oshikoto stock owners would go to the traditional authorities in Okavango and ask permission to stay. Sometimes permission was granted, and sometimes not.

Of late, however, Okavango people were becoming increasingly impatient: 'You allow private farmers to steal all your land, and then you shift over here. The problem of land scarcity in Oshikoto is your problem and you should solve it internally rather than invading us.'

Other Issues

— The Ndonga Traditional Authorities observed that this rainy season had been good, there was much grass, and uncontrolled fires would likely be a problem this dry season. They repeated a request that they had already taken to all relevant authorities,

for assistance in obtaining machinery to clear fire breaks.

— It was argued that Namibian organisations - NGOs, Government and Traditional Authorities - should develop a capacity to conduct research of the kind presented at the workshop. Namibians had a responsibility to do studies like this for themselves, and not wait for outsiders to do it for them.

— Late in the proceedings, a speaker proposed the creation of government-sponsored grazing exclosures to protect grazing resources for use by all herd owners. Time did not permit a discussion of these proposals.

— It was recommended that government provide financial and other assistance to encourage farmers who had enclosed communal land to move out of the communal areas, purchase commercial farms and resettle south of the veterinary cordon fence.

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