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**RANGELAND AS A COMMON PROPERTY RESOURCE:
CONTRASTING INSIGHTS FROM COMMUNAL AREAS OF
CENTRAL EASTERN CAPE PROVINCE, SOUTH AFRICA**

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ABSTRACT

This paper explores the grazing management systems in operation in communal areas of central Eastern Cape Province, South Africa, through two contrasting case studies from the region. Considerable differences in current management systems are identified and are shown to depend primarily on the degree of control that can be exercised by communities over communal grazing resources. This in turn can be related to the social and ecological heterogeneity that characterises the region and how this influences pressure on grazing resources at the local level. On the basis of this study three broad levels of grazing management system are identified in these communal areas. These are: complete lack of management with grazing taking place in an 'open-access' manner; grazing being controlled on a community basis and grazing taking place on private land and being controlled entirely by the landowner. The arable land allocations are shown to be of fundamental importance in facilitating many aspects of these different management scenarios. Understanding the variation in these systems from both a social and ecological perspective will be fundamental in challenging previous management paradigms, and facilitating the development of effective common property institutions for grazing management systems in communal areas of South Africa.

KEY WORDS: South Africa, rangeland, livestock, common property regimes, grazing management.

INTRODUCTION

Throughout the world, extensive livestock production from natural rangeland areas is an important livelihood strategy for many rural communities (e.g. Moorehead, 1989; Sellen, 2003). Many of these communities are largely pastoral in nature with livestock herds ranging over extensive areas of common grazing land, often on a seasonal basis (Naimir-Fuller, 1999; Turner and Hiernaux, 2002). The key feature connecting many of these systems is that rangeland used for grazing is held and administered as common land – a common property resource. Both Berkes *et al.* (1989) and Ostrom *et al.* (1999) consider common property resources as those that share two important characteristics. The first is that exclusion (or control of access) of users to these resources is problematic. The second is that each user is capable of subtracting from the welfare of other users. Thus, in a more simplistic way common property resources can be defined as “a class of resources for which exclusion is difficult and joint use involves subtractability” (Berkes and Farvar, 1989: 7).

Inherent in this definition is the potential for the over-exploitation of these resources as epitomised by the ‘tragedy of the commons’ scenario famously articulated by Hardin (1968). However, substantial empirical and theoretical research undertaken since the publication of Hardin’s article suggests that this outcome constitutes just one of several alternative scenarios and thus should in no way be viewed as inevitable (Ostrom *et al.*, 1999). Rather, it has been demonstrated that in many parts of the world effective governance systems are in place, which allow common property resources to be utilised sustainably (e.g. Moorehead, 1989; Niamir-Fuller, 1998). Characterising these systems and the conditions that support or, indeed, erode them

has been the focus of considerable research attention in recent years. Nevertheless, these systems continue to remain poorly understood in many areas.

South Africa is one example of a country in which the management of grazing systems in communal areas has only just begun to be elucidated. Here common grazing resources have been subject to considerable state interference in the way they are held and managed (De Wet, 1987; Yawitch, 1988) as they have in other parts of the world (Sneath, 1998; Woodhouse *et al.*, 2000), but what is almost unique is the sheer scale and time period over which this has taken place. The historical legacy of minority rule has given rise to a situation in which communal grazing of rangeland is almost exclusively confined to the former 'bantustans' or homeland regions of the country. These areas, designated under colonial rule and formalised under apartheid, constitute just 13% of the total land in South Africa and were created as reserves in which the bulk of the black population was forced to reside (Yawitch, 1988). Indeed, some 12.7 million people (32% of the national total) still live in these areas (Adams *et al.*, 2000). Management strategies in many of these former homelands are no longer informed by seasonal herding to the extent that they once were. For example, until the early nineteenth century, the Xhosa in the Eastern Cape would maintain their livestock in the more productive valleys during the dry season, and herd them onto the poorer grasses of the open plains only when the new shoots appeared in the spring (Peires, 1982). Such movements are no longer possible within the confines of a modern regulatory framework introduced under colonial rule and systematically imposed in most areas under apartheid (De Wet, 1987). Thus, although state intervention in common property grazing systems is widespread in sub-Saharan Africa, what is unique in the South African situation is the extent to which it was imposed and, perhaps most importantly, the effect this has had on the way these systems are now held and managed.

At present relatively little is known about the diversity of the livestock management regimes practised in these areas, due mainly to the dearth of research conducted during the apartheid era and an assumption that these systems are of a single, relatively uniform type (Cousins, 1996). Indeed, until relatively recently, the general perception amongst policy makers within the country was of a very *laissez-faire* approach to grazing management in the communal areas characterised by indiscriminate grazing on an open-access basis (see for example Forbes and Trollope, 1991). The previous apartheid regime readily fostered such misconceptions by conveniently aligning its concept of communal grazing with the tragedy of the commons paradigm of Hardin (1968), in which over-exploitation of the commons is seen as an inevitable consequence of communal use.

Ciriacy-Wantrup & Bishop (1975) were amongst the first to explicitly recognise the major failing of Hardin's paradigm in its confusion of common property with open access. Since this time there has been a gradual move away from the conventional stance and an increasing recognition of the ability of the commons to be managed sustainably on a communal basis as well as a formal articulation of the social environment necessary to facilitate this (Berkes *et al.* 1989). Fundamental in this new thinking (the 'new institutionalism' as it has become known) has been the recognition of the need to distinguish between common property resources and the regimes under which they are held (Berkes and Farvar, 1989). The latter are generally recognised to be divisible into four different property rights regimes, namely open-

access, common (or communal) property, private property and state property (Berkes *et al.*, 1989). The first two are of particular importance in the context of this paper.

The parameters that distinguish common property from open-access regimes have been concisely outlined by Bromley (1989). In his definition a common property regime consists of a well-defined group of authorised users, a well-defined resource that the group manage and a set of institutional arrangements that define both of these. There are also rules of use for the resource in question. Conversely, in open-access situations users have privilege with respect to the use of the resource as nobody has the legal right to exclude them. However, they have no actual rights to the resource (Bromley, 1989). These differing regimes have important implications for the management of communal grazing resources and their preservation in the longer term. In the common property situation the resource is managed on a consensus basis to the mutual benefit of the community and there is, therefore, an incentive to ensure its productivity in the long term. Under open access however, grazing management decisions are essentially taken on an individual or 'clique' basis with the sole intention of maximising benefit to the individual and there is little or no incentive to manage the grazing resource productively and sustainably in the long term.

Importantly, the democratic, post apartheid government of South Africa has also embraced the 'new institutionalism' thinking on common property regimes, notably in its White Paper on Land Policy (DLA, 1997). However, the government's almost wholesale acceptance of this new common property theory has been criticised by several commentators (e.g Ainslie, 1998b; Cousins, 2000) who feel that many of the premises upon which the theory rests are not fulfilled in South Africa. In particular, the erosion of traditional institutions involved in land administration in the former homelands and excessive problems of landlessness and overcrowding in these areas resulting, has created a somewhat extreme social environment which might constrain how effectively the new theory can be applied (Ainslie, 1998b). Indeed, it is apparent that in many areas of South Africa the management regimes currently in place are more akin to open-access than to what is formally recognised as common property (Cousins 1996, Ainslie, 1998b). For this reason, it is inappropriate to attempt the wholesale application of existing common property theory to the South African scenario. Rather, there are several critical issues to be addressed if common property institutional arrangements are to be effectively tailored to the contemporary conditions of extensive livestock production in South Africa (Cousins, 1995).

Thus, a clearer understanding of how common property regimes function at an integrated level in South Africa is fundamental in developing an empirical basis to facilitate effective institutional capacity building at both the local and national level as well as other policy recommendations. However, the social and ecological realities of these communal grazing systems remain poorly understood. To this end, this paper aims to outline the diversity of grazing management regimes currently in operation in communal areas. Based on a detailed study of two contrasting communities in central Eastern Cape Province, it explores the variation in the key characteristics that differentiate grazing management regimes in the region and interprets them in the context of local social and ecological factors and in terms of the broader debate on inequality associated with land ownership in Africa. A generalised framework of current grazing management systems is developed and its applicability both at a national level and beyond is discussed. Finally, the broader implications of the

research for institutional restructuring and agrarian reform as a whole in South Africa are also considered.

Common property resources in central Eastern Cape Province

This research was undertaken in the central region of Eastern Cape Province in what was formerly the homeland of Ciskei (Figure 1). The region has a turbulent social and political history, which has had an important bearing on the governance of natural resources in the region and the evolution of the property regimes under which they are held. Of particular significance has been the policies introduced since 1948, which were resonant with apartheid's ultimate goal of separate development along racial lines.

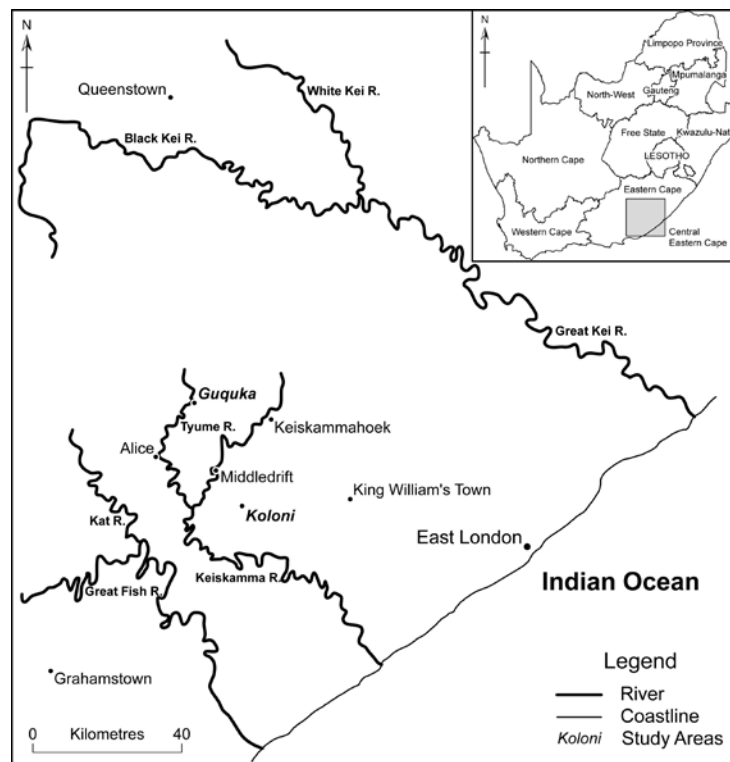


Figure 1: Overview of central Eastern Cape Province, South Africa.

Betterment Planning

Amongst the most important of these policies, with respect to local production systems, was 'betterment planning'. This was first introduced during the 1930s in response to government concerns that the homeland areas were becoming increasingly overcrowded and degraded and as such posed a potential threat to political stability (De Wet, 1987). Subsequently, under apartheid, betterment became far more of a political tool functioning as a mechanism of social control over a growing black population (De Wet, 1987). The imposition of betterment was particularly thorough in the former Ciskei, with nearly 80% of the communal areas subject to some level of betterment by the early 1970s (Trollope and Coetzee, 1975).

The betterment process was concerned primarily with improving land use and its most tangible manifestation was the division of existing community land into rangeland, arable land and residential land by the use of fencing (De Wet, 1987). Concomitant with this change in land use was the introduction of a system of land management, which was frequently enforced by the state. This was primarily oriented towards agriculture and included the restriction of crop production to designated areas of arable land and the active management of rangeland for livestock production. The overall effect of this was to remove many of the key characteristics of the previous common property regimes under which agricultural resources were held. The result was property regimes, which although communal in name were effectively state-controlled.

An important feature of rangeland management, introduced with betterment, was the rotational grazing of range camps. This generally took the form of the one-herd-four-camp system, whereby one grazing camp was rested for the entire year and the remaining three were grazed on a rotational basis (Forbes and Trollope, 1991). This system was perpetuated under state control in the Ciskei until the early 1970s, when the South African Bantu Trust, responsible for its enforcement, was dissolved and control effectively devolved to individual communities (Forbes and Trollope, 1991). The other major land management exercise introduced with betterment was the opening of the arable land as an additional forage reserve for livestock during the winter. This occurred only when harvesting was complete and was again enforced by the state. The general way in which this system was intended to function under betterment is summarised in Figure 2.

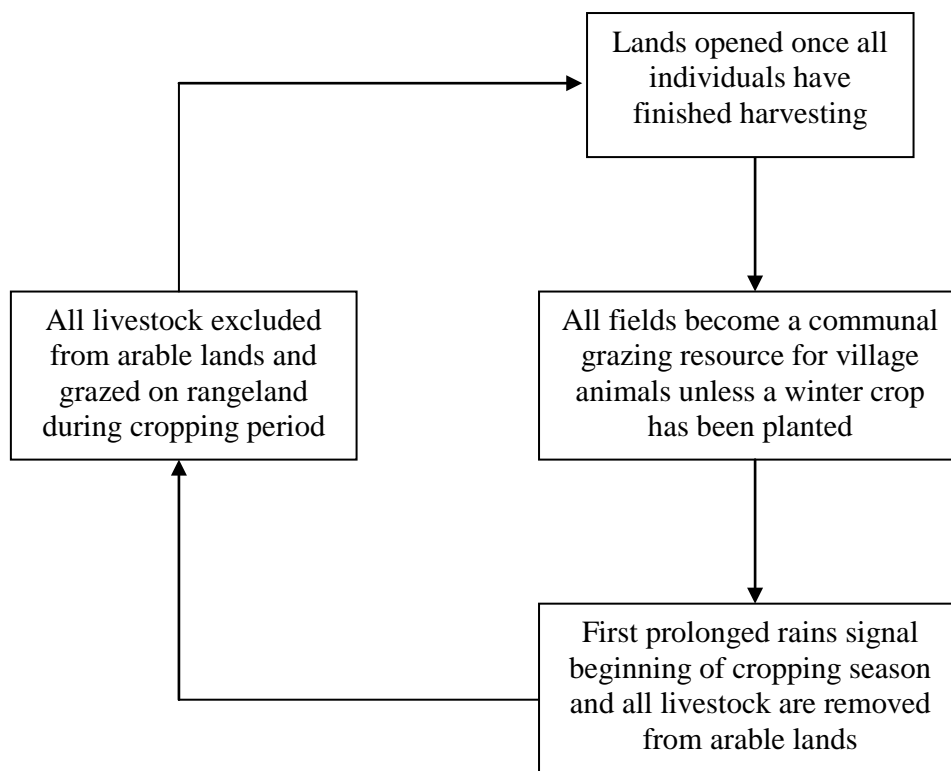


Figure 2: General paradigm for the use of arable land as a dry season forage reserve for livestock under betterment planning

As with rotational grazing, control over the management of arable grazing now rests with individual communities and the level of adherence to the original betterment system varies considerably.

Thus, in the former homeland of Ciskei, the complicated system of land division and management associated with betterment planning, combined with the already diverse tenure arrangements governing the ownership of land, created a highly complex system of land rights and resource management. A simplified representation of the way in which this system functioned in many communities is summarised in Table 1.

Table 1: Land rights and use associated with different land types and times of the year in communal areas of the former Ciskei.

RESIDENTIAL LAND	ARABLE LAND ALLOCATIONS		RANGELAND
	Wet Season	Dry Season	
Land consisting of building lot and/or home garden and held under a variety of individual tenure types with varying degrees of security:	Individual rights over fields are maintained with the same tenure system as residential plot and the field may be used to produce a summer crop.	Individual rights over fields are relinquished as the arable lands become a common property grazing resource for livestock.	Rangeland used for grazing community livestock throughout the year as part of a common property regime.
Freehold Quitrent Communal Trust		Individual rights can be maintained in circumstances where a winter crop is produced.	Management involves resting of one camp and rotational grazing of the remainder.

Of particular importance to this discussion is the way in which land rights and use associated with grazing land have changed in the former Ciskei, since the enforcement of this complex system broke down during the 1970s. Elaborating these changes is crucial in identifying how they have affected the common property grazing regimes associated with these grazing areas.

Forced resettlement

Other examples of government-imposed social engineering in the region, include the resettlement of people forcibly removed from ‘white’ South Africa (RSA) during the apartheid era. These ‘forced removals’ began during the 1950s and continued right into the 1980s in an attempt to realise the separate development goals of apartheid. There was a considerable amount of resettlement in the former Ciskei. However, the redistribution of individuals was far from uniform. Some districts received a large number of social refugees whereas, in a distinctly political move, other more favoured districts within the Ciskei received few or none of these displaced people (Switzer, 1993). As a consequence the region is now characterised by wide variation in population pressure over relatively short distances. This is conjectured to have had a significant impact on the functioning of common property regimes in the region. Maintenance of defined user groups is notoriously difficult when communities are

swollen by immigrants with no official land rights. Under these circumstances common property regimes have the potential to rapidly degenerate into open access (Lawry, 1990).

Ecological variation in range productivity

This social heterogeneity is further compounded by a third factor of considerable importance: the ecology of the natural rangeland in terms of its variable productivity and response to grazing pressure. There are two important aspects of this, which have implications for rangeland management strategies in these communal areas. The first is rooted in the considerable debate that has developed in recent years concerning the degree of feedback between livestock and vegetation in rangeland systems. Recent interpretations of African grazing systems as largely non-equilibrial in character suggest that feedback between livestock and vegetation is absent or at least severely attenuated for much of the time (Ellis and Swift, 1988; Behnke and Scoones, 1993; Niamir-Fuller, 1998). However, there is a growing body of evidence to suggest that many South African grazing systems exhibit characteristics of a mostly equilibrial nature, particularly during drought episodes (Scogings *et al.*, 1999; Fynn and O'Connor, 2000). Certainly, the grazing systems of central Eastern Cape appear to be inherently equilibrial in nature (Scogings *et al.*, 1999). This has important implications for rangeland systems in the region, as it implies that they will respond to livestock grazing pressure and therefore the timing and intensity of grazing requires management to avoid resource degradation.

The other important ecological factor is the natural variation in the productivity of these rangelands in terms of their classification as sweetveld, sourveld or mixed veld (a mixture of sweet and sourveld in varying proportions). This South African classification system is based on the seasonal variation in productivity of the bush and grass species that constitute these different rangeland types (Huntley, 1982). Sweetveld is distinguished from sourveld in that it remains relatively nutritious in the dry season and enables livestock to maintain condition at this time, whereas sourveld declines in quality during the dry season to the extent that livestock frequently lose condition (Tainton, 1999). This difference in productivity is a function primarily of soil nutrient availability and rainfall (Bell, 1982). In general sweetveld is associated with areas of relatively high soil nutrient availability and low to medium rainfall. Importantly, is also characterised by having an inherent 'resilience', which manifests itself in the fact that even under conditions of high grazing pressure and substantial vegetation change (such as in a communal grazing system) good rainfall will allow the system to recover rapidly to an equilibrium state (Walker, 1980). In contrast sourveld tends to be associated with moist and mesic rangeland areas and low soil nutrient availability. It has a relatively poor level of resilience in the face of high pressure grazing and as a consequence is vulnerable to declines in productivity under adverse conditions of grazing or drought.

These ecological differences have important implications for livestock management in communal areas. They suggest that whilst feedback between plants and animals is apparent in both rangeland types, the degree to which this is buffered by physical factors such as soil fertility and rainfall differs quite markedly. Sweetveld areas are less vulnerable in the longer term to the ecological degradation resulting from high grazing pressure and low levels of management (characteristic of an open-access

grazing regime), due to their ability to recover rapidly under conditions of good rainfall. In contrast in sourveld areas such resilience is absent, and some level of management of both livestock numbers and timing of access to key grazing resources is therefore essential to prevent rangeland degradation in the long term.

In summary therefore, these historical social-political and ecological factors interact to create a highly diverse environment at the local level with regard to population pressure, type and quality of forage, the availability and management of rangeland and the effectiveness of local common property institutions. Specific aspects of the social and ecological heterogeneity of each case village will now be elaborated.

The case study villages

Research was undertaken at two villages in central Eastern Cape Province, Guquka and Koloni. These were selected because they were known to be representative of a wide range of both the social and ecological conditions that characterise the region.

Guquka

Guquka, is located in Victoria East District in the foothills of the Amatola Mountains. It is part of a group of villages that formerly constituted the AmaKhuze Tribal Authority, established during the mid to late 19th century (Van Averbeké *et al*, 1998). The arable land is some 150 ha in extent and divided into 41 separate fields. These fields and the original residential plots associated with them are held under quitrent title, a form of individual tenure granted by the colonial government from the middle of the nineteenth century onwards (Cokwana, 1988). The area was subject to limited betterment planning during the 1960s, to the extent that rangeland and arable land was fenced off from the residential section of the village (Figure 3). Importantly, during this time the additional residential sites that had appeared with the natural growth of the village as well as an influx of displaced people, were formalised under Permission to Occupy (PTO), which is a form of communal tenure (Cokwana, 1988). Thus, a two-tier system of land rights now exists at the village involving a ‘landed’ minority with individual title to arable land and ‘landless’ majority with only communal land rights. The range area is shared with two neighbouring communities: the village of Gilton and the adjacent township of Kayaletu. Gilton was established at the same time as Guquka and access to rangeland has historically been shared between them.

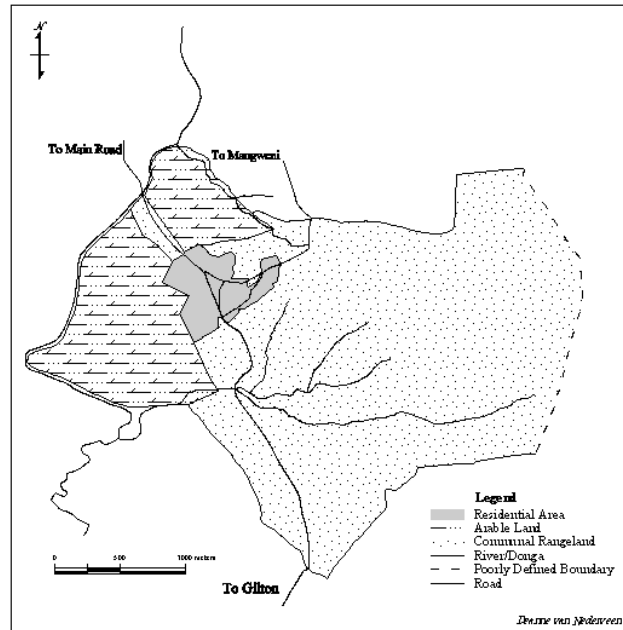


Figure 3: Land use patterns at Guquka village.

Kayaletu is a far more recent settlement being founded during the late 1950s as a repository for black people displaced from the RSA as part of the forced removals programme (Cook, 1980). This had the effect of greatly swelling the local population at this time and putting considerable pressure on the already limited grazing resources in the area. This pressure was further exacerbated by the loss, during the 1970s, of much of the available mountain pastures, which were converted into pine plantations by the Ciskei Forestry Department (Van Averbek *et al.*, 1998). In response to this increased pressure on resources many landowners took it upon themselves to fence their arable fields individually to ensure livestock could not damage crops during the growing season. The majority of this individual fencing is still maintained by field owners (Bennett, 2002). Allocation and management of natural resources is officially under the jurisdiction of the democratically elected Resident's Association (RA). However, at a practical level it appears that control over management of grazing resources rests with a somewhat *ad hoc* grazing committee, constituted by key livestock owners (Holbrook, 1998). This committee is essentially a vestige of the old Tribal Authority System and underlines the failure of the current democratic system to entirely supplant pre-existing institutions involved in land management in the region (Ainslie, 1998a). The local rangeland type is classified as Döhne and Highland Sourveld (Acocks, 1988) and becomes nutritionally poor during the dry season.

Koloni

Koloni, the second study village, is one of several villages that compose the AmaGqunukwebe Tribal Authority located in Middledrift District (Figure 4). The rangeland amounts to 650 ha and belongs exclusively to the village. The arable land allocation constitutes an additional 400 ha of land and is divided into separate fields each of 3 morgen (approximately 2.57ha) in size. The allocation of these fields and the associated residential plots took place from 1876 onwards under quitrent tenure.

Koloni has experienced little growth beyond these original site allocations. Some additional residential site allocations under PTO did take place from the mid 1980s onwards but these have been limited. Thus, unlike Guquka landed individuals with secure tenure are very much in the majority at the village. The village was a pioneer site for betterment, being planned in the late 1930s and extensively improved during the early 1960s. This involved the use of fencing to separate the range and arable lands from the residential area, the division of the range into four separate camps, the construction of stock dams and the widespread introduction of contour banks on the arable lands to help stem erosion (Bantu Affairs Commission, 1962). A rotational system of grazing management was introduced and enforced at this time and this is still perpetuated to a limited extent (Goqwana and Scogings, 1997).

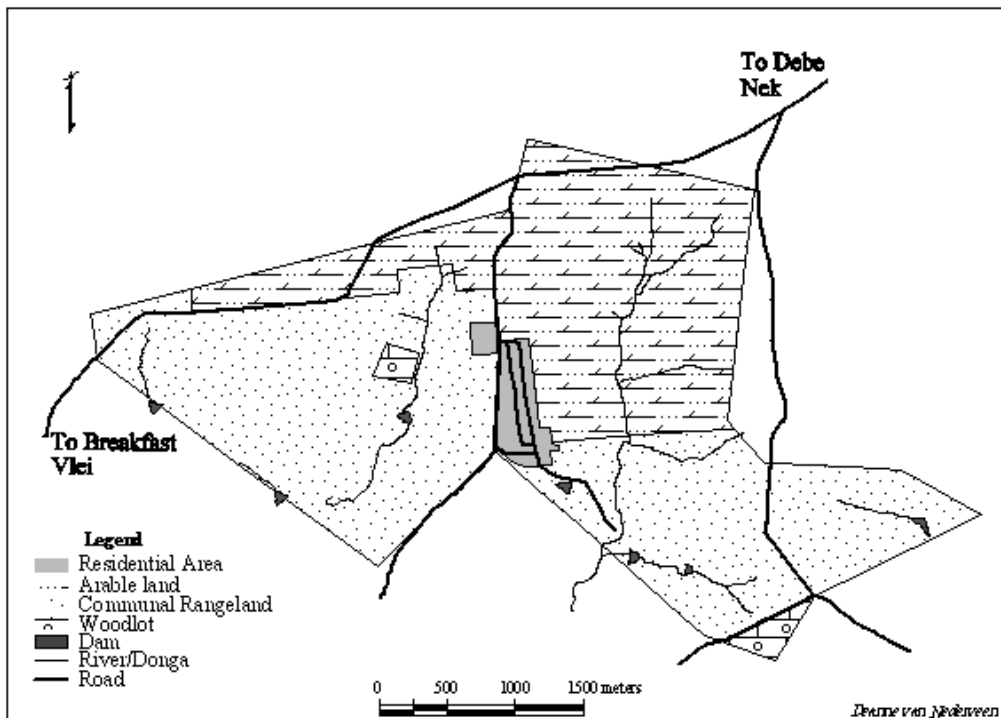


Figure 4: Land use patterns at Koloni village.

As with Guquka, control of grazing management lies with the Resident's Association (RA), which is effectively comprised of all the adult village residents and headed by a democratically elected chairman (Van Averbeké *et al*, 1998). However, there do not appear to be any other, informal institutions involved in resource management. The local rangeland type is classified as False Thornveld of the Eastern Cape (Acocks, 1988). This is a type of sweetveld, which remains nutritious as the grass sward matures, maintaining livestock productivity throughout the dry season.

METHOD

Field data collection

Information regarding grazing management was collected through a series of interviews. Interview work was undertaken between November 1997 and April 1999. Interviews were conducted at both research villages in two stages. Firstly, there was a series of largely qualitative, semi-structured interviews with individual livestock owners (Robson, 1993). The aim of these interviews was to generate data on exactly how people at each village managed their livestock on a day-to-day basis, particularly during the dry season when the arable land allocations became available for grazing. Individuals were selected from those who owned livestock. These were then divided into those who had access to arable land and those who did not and further stratified on the basis of gender to give four social groupings as depicted by the shaded area in Figure 5.

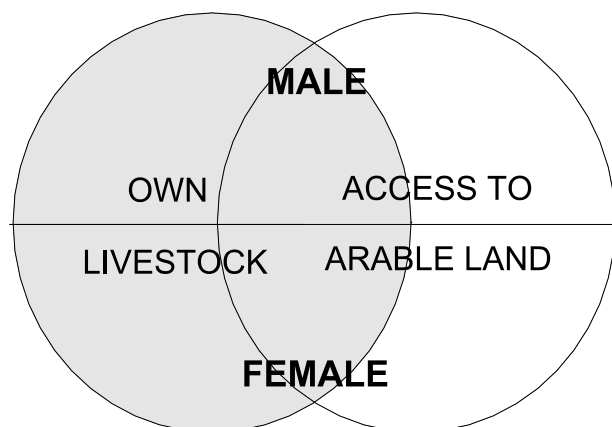


Figure 5: Sample from which interviewees were selected (shaded area)

In each village a 50% sample of each of the four sample groupings was randomly selected for interview. Finally, on the basis of these interviews, detailed case study interviews were subsequently undertaken with individuals whose grazing management practices differed significantly from the theoretical framework outlined earlier (Figure 2). These interviews were undertaken in April 1999, and were largely unstructured and qualitative (Yin, 1989; Robson, 1993).

RESULTS: GRAZING MANAGEMENT IN PRACTICE

The research suggests that grazing is still subject to some form of management at both villages. However, there are major differences in the way this is implemented at the villages.

Rangeland grazing

At Guquka, the rangeland area is available to all livestock species at all times of the year. Moreover, it is utilised not only by livestock from Guquka but also by those from the neighbouring settlements of Gilton and Kayaletu. All that remains of the

fencing introduced under betterment is that which defines the upper limit of the range. Thus, it is no longer possible to practice any form of rotational grazing on the available range area. Indeed, with the demise of the rangers who used to enforce local grazing management decisions, there is no longer any form of co-ordinated rangeland management between the three communities involved (Van Averbeké *et al.*, 1998). Furthermore, there does not even appear to be any form of central control over rangeland grazing at the individual community level. At Guquka control of rangeland grazing is entirely under the jurisdiction of individual livestock owners with regard to timing, duration and the extent to which the animals are allowed to free-range. For reasons of safety small-stock from Guquka tend to be grazed in relative proximity to the village. Cattle, however, can be found grazing throughout the area, including the most mountainous extent of the range during the summer months. Cattle even gain access to the state forest plantations where fencing is inadequate. This leaves them vulnerable to impoundment and theft, the latter having become a significant problem in recent years. Seasonal parameters have an important role to play in the utilisation of the mountain pastures. With the approach of the dry season, cattle move down to the lower areas of the range and do not return to the higher pastures until springtime. However, these management decisions are driven largely by the desire of the animals themselves as well as that of individual owners and are not under any form of communal jurisdiction. Thus, there is no longer any formal, community control over the management of rangeland resources at Guquka and the surrounding area. In essence an open-access situation has developed in which there is mutual privilege with respect to the rangeland for all livestock owners but no formal grazing rights (Bromley, 1989).

At Koloni, extensive control of rangeland grazing is possible because fencing divides the range area into four separate camps and, importantly, this area belongs exclusively to Koloni. Under the original village betterment plan, drawn up in 1961, it was envisaged that one grazing camp would be rested for a period of a year whilst the remainder were grazed on a rotational basis (Bantu Affairs Commission, 1962). This involved a notice being issued from the Bantu Affairs Office at the beginning of each year as to which camp was to be rested. Indeed, rotational resting of the camps is still practised, although it is unclear whether the camp is now rested for the entire year in all cases or whether the original resting regime is still adhered to. Furthermore, it would appear that the rested camp functions as a sanctuary for elderly or sick animals, particularly during the winter. What is clear is that rotational grazing of the camps is no longer practised. Rather, the three camps that are not being rested are grazed simultaneously (Goqwana and Scogings, 1997). This appears to be a practical response to the logistical problem of many livestock owners being located a considerable distance from some of the camps due to the configuration of the village after betterment. Owners now simply make use of whichever of the three camps is nearest to them. Thus, the current scenario involves resting of camps between years (every four years) but no longer within years.

The separation of the range into camps also allows the RA to control the type of animals involved in grazing. During the summer this is of no importance, because mixed grazing is practised on all three grazed camps. However, during the winter months the arable land allocations at Koloni are reserved as a grazing resource for cattle alone (see below). This is possible, because all small-stock are maintained within selected range camps at this time.

Grazing of the arable land allocations

Grazing of the arable land allocations at Koloni is controlled through a clearly defined common property regime from the moment they become available to livestock. The user group includes all those who belong to the Resident's Association (RA), which effectively includes all the adults resident at Koloni. Likewise, at Guquka, management of the arable land allocations is still under some semblance of communal control (unlike the open-access situation that predominates on the formal rangeland area). There are several key features of the control of arable grazing at both villages, which are discussed in turn below.

Initiation of arable grazing.

One key aspect of this grazing management concerns the point at which the arable land allocations are made available to grazing. According to the standard betterment model, the arable land allocations are opened to grazing once the harvesting of all crops has been completed (Figure 2).

At both villages a meeting of the Resident's Association is held, which all individuals who own cattle or have access to a field all field are encouraged to attend, and a decision to formally open the arable fields to grazing is taken once there is agreement amongst participants. At Koloni, every individual who has grown a crop must have finished reaping before the lands are opened. However, at Guquka this decision appears to be interpreted more flexibly. Not everybody finishes harvesting at the same time, and so the grazing of crop residues is frequently initiated before all harvesting is completed. In such instances, livestock owners make an arrangement to put their animals on one field after another in a staggered manner. The process is continued until harvesting is completed on all fields and it is only at this point that the entire arable allocation is opened to grazing. This can be viewed as a practical means of supplying hungry livestock with forage at a critical time of the year as well as preventing trespassing cattle from Kayaletu from gaining access to these vital crop residues. In both cases is made possible by crop production at Guquka taking place almost exclusively in fenced fields.

With regard to the closing of the lands a number of human and climatic factors influence the decision. In the late dry season individuals begin to prepare for the next season of cropping. The desire of individuals to begin cultivating, combined with the state of the range camps, determines the exact timing of the closure. The single most important factor in this decision is the coming of the summer rains as this simultaneously heralds both the time of planting and the recovery of the range camps. After the first period of prolonged rain a meeting of the RA is held in which the closure of the arable lands will be discussed. Given sufficient agreement amongst those owning livestock and those wishing to cultivate, the motion will be carried and the lands officially closed. At this point, livestock owners are obliged to remove all their animals to the appropriate range camps.

Livestock involved in arable grazing.

As well as the timing of arable grazing, the grazing management system at each village also controls the type of livestock allowed on the arable lands. At Koloni it is clear that the arable land allocations are reserved exclusively for cattle. This is because they are perceived as being the most valuable of the livestock species (culturally and economically) and at greatest risk from lack of forage during the dry season. All small-stock are restricted to the range camps at this time and the few that gain access to the arable lands do so as a result of inadequate perimeter fencing. In contrast at Guquka, grazing of the arable land allocations takes place on a mixed basis during the dry season, involving sheep and goats as well as cattle. This is actually a recommended grazing practice at a commercial level as large-stock and small-stock feed on different types of forage and their feeding patterns complement each other. Grazing them on a mixed basis thus facilitates the most effective utilisation of the available forage resources (Gertenbach *et al.*, 1998).

Grazing of arable fields at other times of the year.

There are also regulations governing the grazing of arable land allocations outside the dry season. At Koloni there is strict adherence to the general betterment model set out in Figure 2 in this respect, as once the fields have officially been closed to grazing no livestock are allowed on the arable land allocations. The only exception tolerated is oxen involved in crop production. For pragmatic reasons these tend to be maintained on the arable lands by their owners during the time of ploughing but are immediately removed once ploughing is complete. At Guquka however, it is clear that there is a marked deviation from the betterment model with the arable fields being grazed by livestock both from within the village and outside throughout the course of the cropping period. Lack of available grazing at Kayaletu encourages livestock owners from this settlement to maintain their animals on Guquka's arable lands. This appears to be an ongoing source of contention, as during dry season 1999 several key livestock owners from Guquka were observed repairing sections of the perimeter fence, where the majority of livestock gained access. This proved successful in the short term but within a few weeks the problem returned following deliberate cutting of the fence (Bennett, 2002).

Furthermore, livestock from Guquka itself also make significant use of the fields for grazing at this time. This mostly takes the form of cattle grazing individually fenced fields either because owners are absent from the village (i.e. the field is uncultivated) or because animals are sick or unruly. Another powerful incentive for owners to restrict livestock to fenced fields at this time is stock theft. Cattle in particular have a tendency to wander over considerable distances when given access to the mountain pastures during the summer, which makes them vulnerable to theft. Thus, restricting cattle to fenced fields allows them to be retained in relatively close proximity to the homestead. However, access by livestock from Guquka to the arable lands during the cropping season is not just restricted to private grazing. Towards the end of the cropping period, increasing numbers of cattle from Guquka can be found free-ranging on unfenced areas of the arable lands. Owners generally justify this behaviour to the grazing committee with an official excuse, but the underlying reason for their presence is invariably shortage of forage on the range area at this time. Moreover, the

owners who are able to engage in this practice tend to be those who are well connected with the grazing committee on the basis of social standing.

Maintenance of individual rights over fields.

Finally, there is also the issue of maintenance of individual rights over fields during the dry season. Conventional wisdom holds that all fields should be accessible by all livestock at this time, unless a winter crop is grown (Figure 2). Every field must be made available for grazing, even those that are fenced. At Koloni this basic protocol is strictly adhered to with all fields being made available to livestock (cattle) unless a dry season crop is grown. Thus, during most dry seasons, there are few restrictions on cattle movements over the arable fields at Koloni from a land rights perspective. At Guquka, however, several residents maintain individual rights over fields throughout the winter without growing crops. This may be for grazing their own livestock or simply for resting a field that was grazed during the summer months. In all cases these exceptions are possible because the field is fenced.

Summary of findings

Thus, there are in practice marked differences in the grazing management frameworks in operation at each village. The key differences are summarised in Table 2.

Table 2: Key differences in grazing management practices at Guquka and Koloni.

Practice	Guquka	Koloni
Rangeland grazing	No communal control over grazing of livestock on rangeland due to inadequate boundary definition and ineffective co-ordination between multiple user groups.	Strong definition of rangeland boundaries and separation into grazing camps through fencing facilitates both rotational resting, the separation of cattle from small-stock in the dry season and exclusive control over rangeland grazing by the community.
Initiation of arable grazing	Grazing of crop residues often undertaken before all harvesting is complete.	Grazing of arable lands only initiated once harvesting is complete.
Livestock involved in arable grazing	Open to all livestock	Limited to cattle
Grazing of arable fields at other times of the year	Arable fields grazed during cropping period both by trespassing cattle from Kayaletu and cattle from Guquka	Grazing of arable lands strictly prohibited during cropping period except by cattle involved in ploughing.
Maintenance of individual rights over fields	Owners may chose to exercise exclusive grazing rights over their arable field(s) even if they have not grown a forage crop.	Owners may only chose to exercise exclusive grazing rights over their arable field(s) if they have grown a forage crop.

The most important of these differences between the villages in terms of their implications for common property institutions in the region are the level of communal control over both rangeland and arable land grazing, and the maintenance of individual grazing rights over arable fields. These will now be explored in more detail.

DISCUSSION

The key differences between the grazing management systems at Guquka and Koloni are essentially a result of differing levels of resource demand, availability and control at each village.

At Koloni local grazing pressure is relatively low and grazing resources are considerable, of good quality and belong exclusively to the village. Moreover, the separation of arable land from grazing land and the division of the range into camps by fencing allows flexibility in control over grazing decisions at the communal level. The quality of the grazing resource at the village has been corroborated by range condition assessments conducted during the late 1990s (ARDRI, 1996; Goqwana, 1998).

The extensive grazing resources at Koloni are unusual in most communal areas of the former Ciskei and are a direct result of the village being a pioneer site for betterment planning in the late 1930s. The government planners, keen to make betterment a success in these pioneer villages, gave them generous allocations of land and other resources (Ndlovu, 1991). In this environment of relative plenty, the RA at Koloni is able to both make and enforce a series of quite complex land rights and management rules associated with the grazing of both the formal rangeland and arable land allocations as part of an effective common property regime. Much of this has been derived from the old betterment model, as outlined in Table 1 and Figure 2, although there have been some notable adaptations. Some, such as the cessation of rotational grazing have been essentially pragmatic. However, perhaps the most important development from a common property perspective is that the key grazing management decisions are no longer imposed by state officials as they were under the Bantu Trust but rather are decided democratically by the community as a whole. In this sense the management system now has a vital element of inclusiveness and community ownership, which was previously lacking. Thus, the current system can be viewed as a modern and flexible interpretation of the original betterment grazing model. Indeed, in its new guise the grazing management model at Koloni fulfils the generally acknowledged criteria for a common property regime in that it consists of a well-defined group of authorised users, has a clearly defined grazing resource that the group manages, a set of rules for the use of the resource and a set of institutional arrangements to oversee these (Ostrom, 1990, cited in Cousins, 1995).

In contrast, the situation at Guquka is very different. The formal rangeland is shared with several other communities and is essentially inadequate for the number of livestock it serves both in terms of the amount of forage available and its nutritional quality as sourveld. This latter factor becomes particularly problematic during the dry season when livestock begin to lose condition without supplementation. Furthermore,

although access to the arable land allocations is officially restricted to residents of Guquka, inadequate perimeter fencing combined with intense demand for grazing resources makes it difficult to retain arable grazing rights exclusively for the village.

Indeed, a two-tier system of individual control over grazing resources appears to be in operation at Guquka. These two levels represent the opposite ends of the spectrum of grazing management and neither fulfils the criteria for a recognised common property regime (Bromley, 1989). At one extreme is the essentially open-access system in operation on the formal rangeland area. Here the rangeland is shared by several neighbouring communities and grazing management is impossible at a communal level as the user group is essentially too large and inadequately defined. There are also no defined rules for resource use or the necessary institutional arrangements to oversee them. A “free-for-all” scenario has therefore developed in which the grazing resource is available to all livestock and grazing management decisions are entirely under the control of individual livestock owners. This is reflected in the condition of the formal rangeland area. The range is dominated by unpalatable shrub species such as *Chrysocoma tenuifolia*, which is a classic indicator of prolonged, high pressure grazing and poor overall condition (ARDRI, 1996).

At the other management extreme is the situation with regard to the grazing of the arable land allocations. According to the betterment model of land division, the arable lands are the exclusive property of the village, this being expressed as either private property (on an individual field basis) during the cropping season or communal property (for the entire area) during the dry season. However, in practice communal grazing rights only seem to be exercised over those fields that are unfenced, and then only partially. Effective institutional control over grazing of these communal areas is compromised by two key factors. The first is the trespassing of livestock from the neighbouring township of Kayaletu onto unfenced arable fields during both the cropping season and the dry season. The second is the ability of individuals with political weight within the village to use the somewhat *ad hoc* grazing committee to arrange for their livestock to graze these unfenced fields during the growing season when grazing is officially prohibited.

Together, these factors undermine the credibility of the RA as an effective institution for the management of the arable lands as a common property grazing resource. Rather, they tend instead to give tacit support to the grazing committee in its capacity for sanctioning deviations from the traditional model at an individual level or small group level. This corroborates Ainslie’s finding in nearby Peddie district that the existence of unofficial systems allows rural people to “...circumvent the (weak) statutory institutions and to pursue alternative strategies concurrently or sequentially to achieve their particular objectives in relation to institutions engaged in land management.” (Ainslie, 1998b: 8).

Thus, social relations and ecological factors seem to be combining to produce what are essentially three different management scenarios at the two villages. A simplified overview of the general process is summarised in Figure 6.

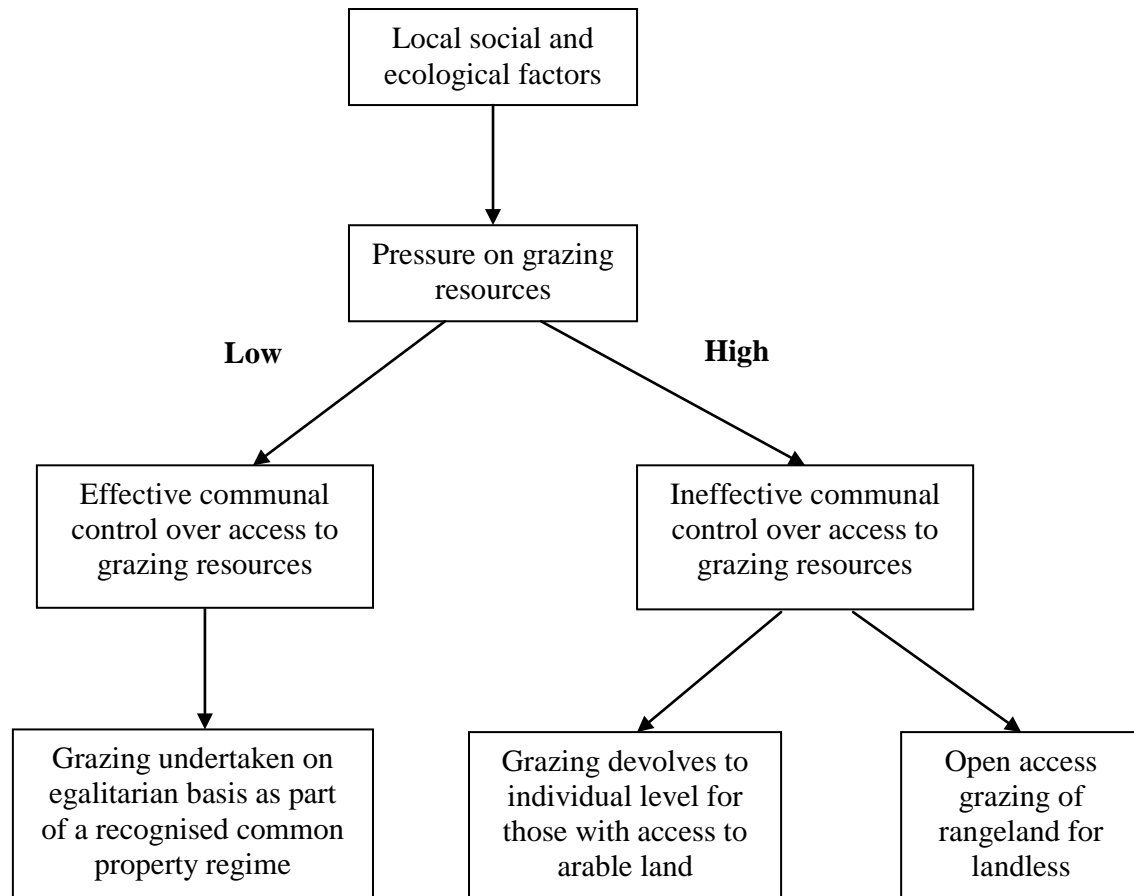


Figure 6: Framework describing how the interplay of social and ecological factors at the local level determines the range of grazing management systems in operation at Guquka and Koloni.

In what might be considered the most familiar situation there is little or no management of the grazing resource by the community and grazing is effectively open-access in nature. In truth this scenario is probably representative of the situation in many areas of the central Eastern Cape region. Indeed, Cousins (1996), has documented conflicts over grazing rights amongst several of the villages in Sheshegu and Tyefu locations in the former Ciskei. On this basis he suggests with regard to this area that "...most communal rangeland may even be under a form of 'open-access' rather than even 'minimum' common property" (Cousins, 1996: 198). This 'minimum' scenario is met when group membership rules are well defined and non-members are excluded. Such arrangements are often adequate when pressure on local resources is not excessive but are ineffective when population growth or technological change increase demand on local resources and an open access scenario develops (Lawry, 1990). This paradigm seems to reflect what has occurred at Guquka and other rural areas of the former Ciskei and would suggest that the open-access grazing situation is a widespread phenomenon in the central Eastern Cape region.

Nevertheless, it is clearly not the only management regime in operation in the region. In certain areas, where the ecology is suitable and appropriate social frameworks are in place, effective management is possible at a communal level. This is epitomised by the situation in villages such as Koloni, where an appropriate (and arguably

fortuitous) blend of social and ecological factors have combined to create a highly favourable environment for communal livestock management. However, such a case must be regarded as somewhat exceptional in a region generally characterised by high population density and limited grazing resources and this type of management regime cannot therefore be considered characteristic of the region as a whole.

Evidence of the perpetuation of common property regimes in comparable scenarios elsewhere would also appear to be limited. In other parts of the world, state interference in common property grazing systems, has generally resulted in inequitable distribution of resources, conflict between user groups and measurable declines in rangeland productivity (Sneath, 1998, Ostrom *et al.*, 1999; Peters, 2004). In most cases however, state intervention has rarely been as extensive or systematic as in the communal rangelands of central Eastern Cape Province. Perhaps the most comparable scenario is provided by the grazing schemes in communal areas of Zimbabwe, which largely parallel the imposition of betterment planning in the former Ciskei (Scoones, 1999). These schemes have proved successful in situations where the requisite conditions for common property management have been upheld, notably where "...groups have come together to defend their (usually relatively well endowed) grazing area from encroachment by others, as well as investing in the improvement of the resource itself." (Scoones, 1999: 231). The similarity with the situation at Koloni is considerable and likewise underlines how adequate grazing, a strong sense of group identity and a willingness to invest in a valued resource can facilitate the existence of a functioning common property regime even in a relatively artificial environment of centralised planning.

However, the overall verdict on these schemes is very mixed with one of their key failings being the inadequate attention paid to existing patterns of resource use and heterogeneity when the paddocks were demarcated. This has resulted in animals being grazed opportunistically on pastures outside the scheme boundary during difficult periods such as the dry season or drought episodes (Scoones, 1999). At Koloni, the need for such opportunism has been avoided only as a result of the natural productivity of the rangeland during the dry season combined with the availability of a key grazing resource in the form of the extensive arable land allocation. This has been instrumental in facilitating the survival of the village common property regime. Here it is a situation of relative privilege at the community level, which prevents the creation of potential resource conflicts with neighbouring settlements.

The third scenario of grazing management identified through the case studies is that of individual control over the grazing resource. This is exemplified by the use of privately owned fenced fields at Guquka for the grazing of livestock. Such a complete secession from the communal system can be regarded as inevitable in an environment where communal grazing resources are under huge pressure and a privileged minority has access to private land. It also reinforces the view that historical inequality in land holdings, both within and between settlements in the region, underpins much of the variation in current grazing management practices. In this situation the inequality is expressed in terms of the ownership of individual plots of arable land by a privileged minority from established families. How representative this scenario is of the general situation in the region is debatable. Certainly, this research is amongst the first to formally document this situation in central Eastern Cape Province. However, given that similar inequalities in the allocation of arable

land characterise other parts of the region such as Keiskammahoek District (De Wet, 1995) it seems likely that it is more widespread than the literature would suggest.

At a broader level, the devolution of production to an individual level in communal areas of the former Ciskei, appears to be representative of what is taking place in other parts of Africa. Indeed, the current literature connected with land tenure change and political economy suggests that the privatisation of land in communal areas by individuals or cliques is occurring throughout sub-Saharan Africa (Woodhouse *et al.*, 2000; Peters, 2004). Southgate and Hulme (2000), demonstrate that paralleling the development of group ranches in Southern Kenya is a centralised policy of converting communal land into individual agricultural holdings. These holdings have taken the form of both private ranches and arable farms and have mainly been appropriated by wealthy individuals. However, in response to this many more marginalized people, such as the Maasai, have begun to illegally lay claim to land and enclose it through fencing. Likewise, in Zimbabwe there is an increasing propensity for individuals to illegitimately annexe parts of the communal rangelands for private use by enclosing them with a fence (Fortmann, 1995).

In both cases the spontaneous enclosure of land through fencing is broadly representative of what has happened in central Eastern Cape Province. In all these scenarios this reaction can be considered a response to increasing levels of competition over available land. However, an important difference is that in villages such as Guquka, people have legal title to the land they are enclosing. In many ways this situation is peculiar to South Africa and the former Ciskei in particular, as the extended history of land ownership by Africans under secure forms of tenure is something that finds limited parallel in other parts of sub-Saharan Africa. Nevertheless, the overall effect of the enclosures is the same in all three situations - to deny the remainder of the population a share in what was previously a communal resource.

Thus, the current grazing management scenario in central Eastern Cape Province appears to be characterised by several different systems operating on an overlapping and concomitant basis. This heterogeneity can be explained through unequal patterns of ownership of and access to land. Regionally, this inequality manifests itself as either community privilege, whereby certain settlements have considerably greater levels of access to land than others or individual privilege, which involves inequality within communities in terms of the ownership of or the ability to access grazing land by individuals. Moreover, these types of inequality appear to be part of a broader phenomenon, which is shaping the tenure systems and negotiations surrounding grazing land throughout Africa (Peters, 2004). Thus, whilst aspects of the current management systems identified here, such as arable enclosure may be largely unique within sub-Saharan Africa, the underlying causal factor is anything but.

CONCLUSIONS: IMPLICATIONS AT THE INSTITUTIONAL AND POLITICAL LEVEL

These research findings are of fundamental importance to the debate on the suitability of common property theory as an ideological basis for policy on restructuring livestock production systems in communal areas. They lend support to the arguments of commentators such as Ainslie, that the level of heterogeneity that exists within grazing systems in areas such as the former Ciskei makes the use of common property theory in this respect neither straightforward nor entirely desirable and that land reform policy should attempt to recognise this (Ainslie, 1998b). In particular policy must acknowledge that whilst common property regimes do still exist in communal areas, albeit in often modified form, they may only be a relatively minor component of the property regimes currently in place (Andrew *et al.*, 2003). The grazing management scenario that exists at Koloni seems to be exceptional in areas such as the former Ciskei. Rather, most systems have degenerated into a combination of open-access supplemented by grazing under private tenure for those livestock owners who have access to private land. Thus, wholesale attempts to revitalise common property systems in an environment that is now largely devoid of the framework to support them are likely to be ineffective. Rather, it might be better to work flexibly with those frameworks that are already in place.

This is underlined by the debate surrounding the reform of tenure and institutions associated with land management. The focus of the general debate has been on the creation of effective institutions controlling access to and use of communal rangelands. The relatively recent introduction of the Communal Land Rights Act (CLRA)(DLA, 2004) has only served to intensify the debate. Many commentators are dismayed by the undue emphasis the legislation places on the issuing of land titles to groups or individuals (Cousins, 2002) and concerned by the continuing central role of chiefs and traditional authorities in the new institutions associated with land management in communal areas (IRIN, 2003).

This has considerable bearing on the research findings presented in this paper. It is clear that at a statutory level, broadly similar democratic institutions (RAs) exist to control grazing management at both villages. However, they function with markedly different levels of effectiveness. At Koloni the RA performs well in its role of co-ordinating grazing management at a communal level as well as in its other roles associated with land management. This corroborates the point made by Ainslie (1998b) that local institutions need not be totally rebuilt in order to be effective. Importantly, the CLRA makes provision for the establishment of local administrative bodies, which are entirely democratically elected. In communities such as Koloni, this will give formal recognition to the authority of civic bodies such as the RA in enforcing grazing management decisions within the community as well as legal recourse in the case of disputes that may arise with neighbouring communities.

At Guquka the situation is less straightforward and probably more representative of the situation prevailing in most former homeland areas. The simultaneous existence of both a statutory RA and an unofficial grazing committee weakens the jurisdiction of the former. This raises the possibility of co-management or the 'nesting' of the informal institution within the statutory one in order to facilitate a more communal approach to management, as proposed by Lawry (1990). The CLRA can facilitate this

through the democratic election of the informal actors to the local land administration committee. However, there is the very real danger that this will simply result in the legitimisation of the existing scenario of unequal access to land by a privileged minority (Cousins, 2002; Peters, 2004). In situations such as this any official institutions that are established are unlikely to override existing social and political realities, without the concomitant reform of land holdings.

This brings into consideration the other important element of the CLRA, which is the transfer of land to groups and individuals. Like institutional reform, this is also likely to have differential impacts across the former Ciskei. In unusual cases, such as that exemplified by Koloni, the transfer of land envisaged by the CLRA will effectively formalise in law what is already taking place at a *de facto* level. The communal range camps are already controlled and administered exclusively by the community and in such an environment, these changes are likely to have a positive impact on the local community by giving legal recognition to existing rights over access and use. However, in communities such as Guquka enshrining rights over communal land in the community itself may serve only to strengthen divisions in land access. At present several communities have access to the communal grazing land including the township of Kayaletu, which has no formal grazing rights. The dilemma is whether to formalise all existing access arrangements and risk legitimising a tragedy of the commons scenario, or to restrict use only to the villages of Guquka and Gilton, which have historical access rights and thereby give legal support to the exclusion of grazers from Kayaletu. Neither of these scenarios would be realistic unless complemented by the provision of additional grazing land from elsewhere.

The CLRA does in fact make welcome provision for land restitution or comparable redress where this is not possible (DLA, 2004). Villages such as Guquka, where much of the upland grazing was appropriated by the state for conversion to forestry plantations, have a strong case for land restitution. Without additional land the majority of communities in the former Ciskei will continue to face a situation in which land-based livelihoods continue to be the reserve of a privileged minority based on the enclosure of privately-owned arable plots. Indeed, land provision must also be considered a pre-requisite for the effective reform and development of institutions associated with grazing management in communities such as Guquka.

Thus, the development of a policy environment which has the capability to support the enormous heterogeneity of existing grazing management systems in communal areas of South Africa will be vital if effective agrarian development is to take place. The ability to respond to community needs on a case-by-case basis will depend ultimately on the provision of flexible policies that feed into and build on the management frameworks that are already in place. Fundamental in the development of these policies will be an acknowledgement that in the climate of land deprivation and minority privilege that prevails in the former homelands, the reform of communal land ownership must be complemented by the provision of formal mechanisms through which the rural poor can gain access to additional rangeland.

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REFERENCES

Acocks, J.P.H. (1988). *Veld Types of South Africa*. 3rd Edition. Memoirs of the Botanical Survey of Southern Africa, 57. Botanical Research Institute, Department of Agriculture and Water Supply, Pretoria, South Africa.

Adams, M.; Sibanda, S. and Turner, S. (2000). Land tenure and rural livelihoods in Southern Africa. In C. Toulmin and J.F. Quan (Editors), *Evolving Land Rights, Policy and Tenure in Africa*. DFID, IIED, NRI, London, pp135-149.

Ainslie, A. (1998a). *Managing Natural Resources in a Rural Settlement in Peddie District*. M.Soc.Sc.Thesis, Rhodes University, Grahamstown.

Ainslie, A. (1998b). *Wading in: the realities of land tenure reform in the communal areas of the Eastern Cape Province, South Africa*. Paper presented at the 7th Annual conference of the International Association for the Study of Common Property, Vancouver, British Columbia, Canada, June 10-14, 1998.

Andrew, M.; Ainslie, A. and Shackelton, C. (2003). *Land use and livelihoods*. Evaluating land and agrarian reform in South Africa occasional paper series no.8. Programme for Land and Agrarian Studies, University of the Western Cape, Cape Town.

ARDRI (1996). Land Use Systems Research Programme. *ARDRINEWS*, December 1996, pp4-14.

Bantu Affairs Commission (1962). *Reclamation and Settlement of Koloni Location: Middledrift District*. File no. (60) N2/11/3/12, King William's Town, February 1962.

Behnke, R.J. and Scoones, I. (1993). Rethinking rangeland ecology: Implications for rangeland management in Africa. In R.J. Behnke; I. Scoones and C. Kerven (Editors), *Range Ecology at Disequilibrium*. Overseas Development Institute, London, pp 1-30.

Bell, R.H.V. (1982). The effect of soil nutrient availability on community structure in African ecosystems. In B.J. Huntley and B.J. Walker (Editors), *Ecology of Tropical Savannas*. Springer-Verlag, Berlin, pp 193-216.

Bennett, J. (2002). *The Role of Arable Land Allocations in Cattle Production Systems in Communal Areas of Central Eastern Cape Province, South Africa*. Unpublished PhD Thesis, School of Science and the Environment, Coventry University.

- Berkes, F. and Farvar, M.T.** (1989). Introduction. In F. Berkes (Editor), *Common property resources: ecology and community-based sustainable management*. Belhaven Press, London, pp 1-17.
- Berkes, F.; Feeny, D.; McCay, B.J. and Acheson, J.M.** (1989). The benefits of the commons. *Nature*, 340: 91-93.
- Bromley, D.W.** (1989). Property relations and economic development: the other land reform. *World Development*, 17(6): 867-877.
- Ciriacy-Wantrup, S.V. and Bishop, R.C.** (1975). Common property as a concept in natural resource policy. *Natural Resources Journal*, 15: 713-727.
- Cokwana, M.** (1988). A close look at tenure in Ciskei. In C.R. Cross and R. Haines (Editors), *Towards Freehold? Options in Land and Development in South Africa's Black Rural Areas*. Juta & Co., Kenwyn, South Africa, pp305-313.
- Cook, G.P.** (1980). Scattered towns or an urban system? In N. Charton (Editor), *Ciskei: Economics and Politics of Dependence in a South African Homeland*. Croom Helm, London, 30-47.
- Cousins, B.** (1995). Common property institutions and land reform in South Africa. *Development Southern Africa*, 12(4): 481-507.
- Cousins, B.** (1996). Livestock production and common property struggles in South Africa's agrarian reform. *Journal of Peasant Studies*, 23(2-3): 166-208.
- Cousins, B.** (2000). Tenure and common property resources in Africa. In C. Toulmin and J.F. Quan (Editors), *Evolving Land Rights, Policy and Tenure in Africa*. DFID, IIED, NRI, London, pp151-179.
- Cousins, B.** (2002). Reforming communal land tenure in South Africa: Why the draft Communal Land Rights Bill is not the answer. www.communitylawcentre.org.za/ser/esr2002/2002nov_land.php
- De Wet, C.J.** (1987). Betterment planning in South Africa: Some thoughts on its history, feasibility and wider policy implications. *Journal of Contemporary African Studies*, 6(1/2): 85-122.
- De Wet, C.J.** (1995). Land tenure, economic differentiation and social interaction in a Ciskei settlement. *Journal of Contemporary African Studies*, 13(1): 57-74.
- DLA** (1997). *Rural Development Framework*. Department of Land Affairs, Pretoria.
- DLA** (2004). *Communal Land Rights Bill*. Department of Land Affairs, Pretoria.
- Ellis, J. and Swift, D.M.** (1988). Stability of African pastoral systems: Alternate paradigms and implications for development. *Journal of Range Management*, 41: 450-459.

- Forbes, R.G. and Trollope, W.S.W.** (1991). Veld management in the communal areas of Ciskei. *Journal of the Grassland Society of Southern Africa*, 8(4): 147-152.
- Fortmann, L.** (1995). Talking claims: Discursive strategies in contesting property. *World Development*, 23(6): 1053-1063.
- Fynn, R.W.S. and O'Connor, T.G.** (2000). Effect of stocking rate and rainfall on rangeland dynamics and cattle performance in a semi-arid savanna, South Africa. *Journal of Applied Ecology*, 37: 491-507.
- Gertenbach, W.D.; Viljoen, J.; Van H. Henning, P.W. and Collyer, J.A.** (1998). The utilisation of maize-crop residues for overwintering livestock 3. Livestock performance as affected by different cattle to sheep ratios when grazing maize-crop residues. *South African Journal of Animal Science*, 28(1): 24-29.
- Goqwana, W.M.** (1998). A comparison of veld condition between two management systems in Eastern Cape communal rangelands. In T.D. de Bruyn and P.F. Scogings (Editors), *Communal Rangelands in South Africa: A Synthesis of Knowledge*. Department of Livestock and Pasture Science, University of Fort Hare, Alice, pp211-221.
- Goqwana, W.M. and Scogings, P.F.** (1997). Rangeland and its management. In W. Van Averbeke (Editor), *ARDRI's Farming Systems Research Programme: Incomplete Preliminary Report*. ARDRI, University of Fort Hare, Alice, July 1997.
- Hardin, G.** (1968). The tragedy of the commons. *Science*, 162: 1243-1248.
- Holbrook, G.** (1998). Some comments on initial participant observation fieldwork in Guquka over the period 3-16 March, 1998. Unpublished report, ARDRI, University of Fort Hare, Alice
- Huntley, B.J.** (1982). Southern African savannas. In B.J. Huntley and B.J. Walker (Editors), *Ecology of Tropical Savannas*. Springer-Verlag, Berlin, pp 101-119.
- IRIN** (2003). Strong opposition to the new communal land rights bill. www.irinnews.org/print.asp?ReportID=37765
- Lawry, S.W.** (1990). Tenure policy toward common property natural resources in sub-Saharan Africa. *Natural Resources Journal*, 30 (2): 403-422.
- Moorehead, R.** (1989). Changes taking place in common-property resource management in the inland Niger delta of Mali. In F. Berkes (Editor), *Common property resources: ecology and community-based sustainable management*. Belhaven Press, London, pp256-272.
- Ndlovu, T.S.** (1991). *Progress in the midst of adversity: A case of two betterment areas in the Ciskei*. Unpublished BA (Hons.) thesis, University of the Witwatersrand.
- Niamir-Fuller, M.** (1998). The resilience of pastoral herding in Sahelian Africa. In F. Berkes; C. Folke and J. Colding (Editors). *Linking social and ecological systems:*

Management practices and social mechanisms for building resilience. Cambridge University Press.

Niamir-Fuller, M. (1999). Conflict management and mobility amongst pastoralists in Karamoja, Uganda. In M. Niamir-Fuller (Editor), *Managing mobility in African Rangelands: The legitimisation of transhumance*. IT Publications, FAO and the Beijer International Institute of Ecological Economics, pp149-183.

Ostrom, E.; Burger, J.; Field, C.B.; Norgaard, R.B. and Policansky, D. (1999). Revisiting the commons: Local lessons, Global Challenges. *Science*, 284: 278-282.

Peires, J. B. (1982). *The House of Phalo: a history of the Xhosa people in the days of their independence*. University of California Press.

Peters, P. (2004). Inequality and social conflict over land in Africa. *Journal of Agrarian Change*, 4(3): 269-314.

Robson, C. (1993). *Real World Research. A Resource for Social Scientists and Practitioner-Researchers*. Blackwell Publishers, Oxford.

Scogings, P.F.; De Bruyn, T.D. and Vetter, S. (1999). Grazing into the future; policy making for South African communal rangelands. *Development Southern Africa*, 16(3): 403-414.

Scoones, I. (1999). Ecological dynamics and grazing-resource tenure: A case study from Zimbabwe. In M. Niamir-Fuller (Editor), *Managing mobility in African Rangelands: The legitimisation of transhumance*. IT Publications, FAO and the Beijer International Institute of Ecological Economics, pp217-235.

Sellen, D.W. (2003). Nutritional consequences of wealth differentials in East African Pastoralists: The case of the Datoga of Northern Tanzania. *Human Ecology*, 31(4): 529-570.

Sneath, D. (1998). State policy and pasture degradation in inner Asia. *Science*, 281: 1147-1148.

Southgate, C. and Hulme, D. (2000). Uncommon property: The scramble for wetland in Southern Kenya. In P. Woodhouse; H. Bernstein and D. Hulme (Editors), *African enclosures? The social dynamics of wetlands in drylands*. James Currey, Oxford; Africa World Press, Trenton; David Philip, Cape Town; EAEP, Nairobi pp73-117.

Switzer, L. (1993). *Power and resistance in an African Society: the Ciskei Xhosa and the making of South Africa*. University of Natal Press, Pietermaritzburg.

Tainton, N.M. (1999). The ecology of the main grazing lands of South Africa. In Tainton, N.M. (Editor), *Veld Management in South Africa*. University of Natal Press, Pietermaritzburg, pp23-53.

- Trollope, W.S.W. and Coetzee, P.G.F.** (1975). Vegetation and veld management. In **M.C. Laker** (Editor), *The Agricultural Potential of the Ciskei: A Preliminary Report*. Faculty of Agriculture, University of Fort Hare, Alice, 71-124.
- Turner, M.D. and Hiernaux, P.** (2002). The use of herders' accounts to map livestock activities across agropastoral landscapes in semi-arid Africa. *Landscape Ecology* 17: 367-385.
- Van Averbeke, W.; Harris, A.P.; Mbuti, C. and Bennett, J.** (1998). *An Analysis of Land, Livelihoods, Governance and Infrastructure in Two Settlements in Former Ciskei*. Report for Land Reform Research Programme II, ARDRI, University of Fort Hare, Alice.
- Walker, B.H.** (1980). Stable production versus resilience: A grazing management conflict. *Proceedings of the Grassland Society of Southern Africa*, 15: 79-83.
- Woodhouse, P.; Bernstein, H. and Hulme D.** (Editors) (2000), *African enclosures? The social dynamics of wetlands in drylands*. James Currey, Oxford; Africa World Press, Trenton; David Philip, Cape Town; EAEP, Nairobi.
- Yawitch, J.** (1988). Betterment as state policy in South Africa. In C.R. Cross and R. Haines (Editors), *Towards Freehold? Options in Land and Development in South Africa's Black Rural Areas*. Juta & Co., Kenwyn, South Africa, pp101-111.
- Yin, R.K.** (1989). *Case Study Research: Design and Methods*. Second Edition. Sage Publications, Newbury Park and London.