

Winners
and losers:
privatising the
commons in
Botswana

Adrian Cullis
Cathy Watson

March 2005



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Preface

This paper was prepared for the Pastoral Civil Society programme in East Africa, which is jointly implemented by the International Institute for Environment and Development (IIED) and the Resource Conflict Institute (RECONCILE).¹ The Pastoral Civil Society programme seeks to build the capacity of pastoral civil society organisations to better understand the dynamics of pastoralism in relation to the broader policy environment so that they can identify their own solutions to current problems, and advocate in an informed and authoritative manner on policy issues of concern to them. As part of these efforts, two pastoral associations from Tanzania (PINGOS and TAPHGO) sent a delegation to Botswana in January 2004 in order to collect information that would enable them to participate better in ongoing policy debates in Tanzania. In recent years, the Government of Tanzania has been exploring the possibility of privatising the commons in particular pastoral areas, and has drawn up procedures for the privatisation of former government held ranches (NARCO). The purpose of this paper was to provide background information to the delegation before their visit, and to suggest some key issues for them to investigate once in Botswana.

Given the wide appeal of Botswana's experience among many African policy makers and donor agencies, the paper was further edited for publication as part of the Co-Govern programme. Co-Govern is a network of NGOs, research institutes, activists and civil society groups in Europe and Africa. It aims to facilitate the sharing of experience and ideas on the management of common property resources, and to promote an informed policy debate on these issues at all levels (local, national, regional and global).

1. The programme is co-funded by DFID through its Civil Society Challenge Fund, the Swiss Agency for Cooperation and Development, the Ministry of Foreign Affairs, Denmark (DANIDA), and Development Cooperation Ireland.

Introduction

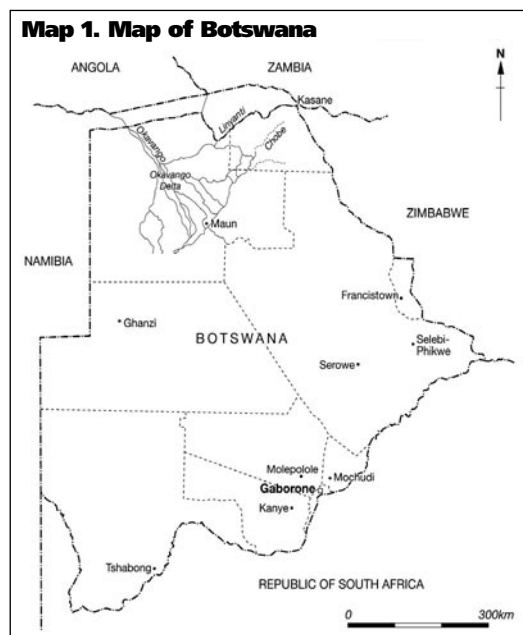


Overview

In recent years, the “Botswana model” of rangeland policy has been heralded by many as a successful example of government intervention to improve the performance of the livestock sector. The simplicity of the theoretical assumptions underpinning the “model” (the so-called “tragedy of the commons” theory) and of the policy implications that it entails (privatisation of common rangelands), make Botswana’s experience an appealing example for policy makers and donor agencies alike across Africa. However, research conducted in the 1980s and the 1990s has demonstrated the limits of tragedy-of-the-commons arguments, and has led to a shift in thinking on range ecology (Behnke and Scoones, 1993). In addition, research undertaken in Botswana over the past two decades has shown the shortcomings of Botswana’s rangeland policy and raised important questions as to its real social, economic and environmental effects.

This paper reviews Botswana’s experience with the privatisation of the commons, drawing on available literature. While several studies were carried out in the 1990s, there is very little up-to-date information on this issue. Therefore, after having reviewed available data and evidence, we will identify key issues for further research on the ground. The paper is likely to be of interest not only for the citizens of Botswana, but also for those grappling with rangeland policy issues in Africa and elsewhere.

After a brief introduction on the geographical and social context, the paper begins with a historical



perspective on land policy in Botswana, starting with the pre-colonial era, followed by the colonial and post-Independence years. The section ends with a summary of the 'new thinking' on range ecology that emerged during the 1980s and 1990s. Section 3 summarises developments in recent years up to the present day. Section 4 presents an analysis of the impact of the process of privatising the commons in Botswana, followed by conclusions and key issues for further research in Section 5. A bibliography at the end of the paper presents the documents referred to in the text and other references that were consulted in the production of this paper.

Setting the scene

Livestock have been at the centre of Botswana's economy for many hundreds of years, and remain crucial to the economy today, catering for 80% of rural inhabitants and 46% of the national population. Beef production is a major foreign exchange earner for Botswana, ranking as the third largest export. (OECD, 2002; White, pers. com.)

Much of Botswana's 600,370 square kilometres is arid or semi-arid. The population is sparse (estimated at approx. 1.5 million (CIA, 2003), with an average density of 2.4 per km², one of the lowest in the world) and the majority depend on cropping, livestock and wage labour for their survival. Only 6 percent of the land is considered to have agricultural potential and only 1 percent is actually cultivated in any one year (Whiteside *et al.*, 1995). Most rural people cultivate small areas of land, in which they hold individual ownership, while grazing their livestock on communal rangelands (known as the 'cattle post' system).

The main ethnic group in Botswana is the Tswana (Batswana), who make up the majority of the population (at least 50%). Other groups include: the BaKalanga, the Basarwa (or San, sometimes called 'Bushmen'), the BaKgalagadi, and whites (CIA, 2003; White, pers. com.).

The western two-thirds of the country are called the 'Sandveld', characterised by low fertility and limited water sources, while the eastern third, known as the 'Hardveld', is slightly more fertile. Water is scarce, with only the Chobe/Linyanti river system in the north and the Okavango Delta experiencing permanent surface water (White, 1993). See Map 1.

Despite Botswana's well publicised success at moving from one of the poorest countries in the world at Independence, to a middle-income country with a per capita GDP of US\$9,500 (largely fuelled by the diamond industry), 47% of the population still live below the poverty line. Botswana's HIV/AIDS infection rate is one of the highest in the world, and unemployment, officially at 21%, is unofficially estimated to be close to 40% (CIA, 2003).

2 Historical perspectives



At first glance, the privatisation of the commons in Botswana began with the **Tribal Grazing Land Policy (TGLP)** in 1975, and was reinforced by the National Policy on Agricultural Development in 1991. However, the roots of this process go back in time to the colonial era and in particular to the drilling of boreholes and their subsequent ownership by individuals and syndicates. This Briefing Paper therefore begins with a short overview of the role of livestock in the pre-colonial and colonial eras.

Pre-colonial times

The people of Botswana have for many hundreds of years pursued a diversified lifestyle, combining agriculture, livestock and hunting and gathering. In dry years when the crops failed, they relied on livestock and hunting and gathering, using livestock to exchange for grains where possible.

The indigenous Tswana cattle are well adapted to the harsh environment and thrive under normal conditions, as do the sheep, goats and donkeys. Until the 19th century, all cattle were the property of the chief, who allocated cattle for herding and provided milk for the herders and their dependants. Under this system, each household was also entitled to sufficient arable land to meet its needs, as well as grazing on the communal rangelands. The *Modisa* (land overseer, plural *Badisa*) managed the allocation of grazing, and also allocated access to surface water (White, 1998a). The *Badisa* were also responsible for monitoring overcrowding and would present possible solutions (such as allocating more rangeland or moving some herds away from heavily used areas) to the community (Niamir, 1991). In this way, control mechanisms existed to regulate livestock numbers and manage the rangelands.

Colonial times

In the 1930s Tswana cattle owners and colonial officials invested in new technology to develop boreholes – deep wells with motorised pumps. Surface water is common property and open to all. However, surface water is very limited in Botswana, and hence most livestock keepers are dependent on artificial sources. Low cost artificial water points (such as wells, dams and hafirs) are limited to the

Box 1. Colonial land policy

- 1895** African chiefs representing the main Tswana tribes agreed that the government could take tribal land for the construction of the railway along the Transvaal border. The railway was finally built well inside the strip and much of the remaining land sold to white farmers as private ranches.
- 1899** The territories of the 5 main Tswana tribes were demarcated as Native Reserves. During the next 30 years, four other reserves were created. Land outside these reserves was demarcated as Crown land and the non-Tswana occupants could be evicted at will
- to 1966** Large areas of state land were occupied communally under customary law, by non-Tswana communities

(Ng'ong'ola, 1998; White, 1993)

Box 2. Rationale for colonial government policy

Colonial officials in Botswana were strongly influenced by the history of the enclosure of the commons in England, which were seen as 'a dangerous centre of indiscipline' (Thompson, 1963, quoted in Peters, 1993:8). This negative image of the commons was exported by colonials, missionaries and explorers who 'saw communal organisation as smothering individual initiative and as obstructing improvement and progress'.

Colonial officers failed to recognise the controls and mechanisms that operated on communal lands, and consequently dissolved some of them when attempting to demarcate and regulate tribal reserves and thus to clear what they considered to be the 'confusion' of tribal law. This lay the groundwork for later, post-Independence government policy (see below).

(Peters, 1993: 9-10)

areas with high water tables, which excludes much of the country where the water table is too deep. Until the advent of boreholes, therefore, these areas were not accessible for livestock because of the lack of water (White, 1993).

As drilling is expensive and risky, it was largely only the wealthier cattle owners or the government who were able to invest in these boreholes. Some boreholes were drilled by the government and development agencies for communal use, but most were eventually privatised and are now owned by individuals or more commonly syndicates (Peters, 1994; White, 1993).

The creation of the boreholes at this time began a process of opening up considerable areas of new land for grazing, a process that continued for many decades: in 1936, permanent access to rangelands was around 20% of Botswana's land area, by 1986 this figure had risen to over 45% (Arntzen *et al.*, 1996; White, pers. com.). This led to a significant increase in the national cattle herd, from 1.2 million in 1934 to about 3 million in 1998 (White, 1998a). Since the boreholes were

mostly owned by individuals or syndicates, the grazing around them began to be seen as belonging to the borehole owners, thus laying the seeds for the privatisation of communal grazing land in the years to come.

Following a severe drought in the late 1930s, coupled with high levels of livestock mortality, the colonial government became concerned about apparent overgrazing and initiated a number of livestock development projects (White, 1998a). This concern increased as Tswana herds grew (thanks to the increased availability of water through borehole development) and the pasture around the boreholes began to deteriorate. In the 1960s drought, many cattle died of hunger rather than lack of water. The government then shifted its livestock development policy from investment in water to the rationalisation of land tenure (Peters, 1994).

Livestock markets for Botswana meat in the UK and Europe were developed in the 1950s, following the Colonial Development Corporation's major investment in livestock ranches and the Lobatse abattoir. The need to preserve these markets led to the construction of long fences ('veterinary fences') to separate quarantine zones to control Foot and Mouth Disease. The domestic cattle market (sales for cash) also developed during this period as remittance payments from South Africa were invested in cattle (White, 1993).

During colonial times wildlife was not considered to be of significant value and hence the colonial government had little interest. In tribal lands, the chief controlled wildlife and granted the right to hunt. Africans had the right to hunt most species on state land for subsistence purposes, although some species such as eland and gemsbok were declared royal game and required a licence. Shortly before Independence the colonial government began to recognise the potential value of game and established regulations for safari hunting by wealthy non-residents (from South Africa and Zimbabwe) (White, 1998a).

The post-Independence years

Until the discovery in the 1970s of mineral deposits, most notably diamonds, the cattle industry had been Botswana's chief source of income. With the development of the diamond industry, its importance was reduced, but it continues to be the largest single source of income for Botswana's rural population and as noted above, beef remains a major source of foreign exchange (White, 1998a; OECD, 2002).

In 1968, the World Bank supported the first large-scale livestock development project following Independence (called Livestock Development Project 1 – LDP1). The project encouraged the uptake of ranching, based on the model of ranches

run by white settlers. LDP1 was followed by LDP2, which funded the Tribal Grazing Land Policy in 1975, probably the most significant policy development with regard to the communal rangelands in Botswana. The TGLP was based on the assumption that the communal rangelands were degraded, that this degradation was caused by overgrazing, and that the overgrazing was due to communal rather than private ownership (see Box 2). It also assumed that 'startling increases in the productivity of livestock in the Communal Areas were possible' if they could be managed differently. Comparisons between the productivity of cattle on ranches and those grazed on communal rangelands were made, which however did not take into account that the ranches providing the data were experimental ranches run for scientific not commercial purposes with uneconomic levels of management (Abel and Blaikie, 1990). The TGLP also assumed that large areas of 'unused' land existed on which commercial ranches could be established (White, 1993).

Box 3. Post-Independence land policy

- 1966 Independence.** According to the Constitution, every person is protected from 'deprivation' and 'expropriation' of property without compensation
- 1966 State Land Act.** Crown land became state land, the state had the power to evict residents such as the Baswara of the Central Kalahari Game Reserve without compensation for the loss of access to their ancestral lands.
- 1968 Tribal Land Act.** Paved the way for the creation in 1970 of Land Boards to take over customary land administration and allocation from the chiefs.
- 1975 Tribal Grazing Land Policy (TGLP).** Tried to address rangeland degradation by encouraging ranching through the allocation of exclusive rights to groups and individuals on newly designated commercial land (see text).
- 1991 National Policy on Agricultural Development (NPAD).** Reinforced TGLP and called for an 'acceleration in the fencing of communal areas'.
- 1993 Tribal Land (Amendment) Act.** Requires Land Boards to work in the interest of all citizens of Botswana and forbids discrimination against non-tribespeople, even if they have no prior claim. Limits the rights of tribes and opens up land to speculation by outsiders (Ng'ong'ola, 1998; White, 1998b; Peters, 1994; Abel, 1993).

Under the TGLP, tribal land was zoned into three areas:

- *Commercial land* (exclusive rights granted to individuals and groups);
- *Communal land* (based on the 'traditional system', but promoting 'better management');
- *Reserved areas* (unallocated land 'set aside for the future as safeguards for the poorer members of the population') (Peters, 1994; Sweet, 1987).

Later, a fourth zone was added:

- *Wildlife Management Areas* (domestic stock permitted but wildlife is the primary form of land use).

Box 4. Rationale for post-Independence government policy

Post-Independence government policy in Botswana, in particular the TGLP, was heavily influenced by the prevailing view of the commons also held by colonial officials, and famously summarised in Hardin's article on the 'Tragedy of the Commons' in 1968.

Hardin's theory was based on two assumptions: that the commons equates with open access; and that users of the commons are selfish. The Botswana government was concerned about what it considered to be irreversible degradation in the communal rangelands caused they believed by overgrazing. It assumed that the overgrazing was the result of communal ownership and viewed individual allocation of land as the best way to address this problem

The link with Hardin is explicit: a government advisor is known to have informed officials about the article, and some parallels in the phrasing of the article and the TGLP have been observed.

(Abel and Blaikie, 1990; White, 1998a; Peters, 1994)

Through the TGLP, part of the communal grazing land was designated for commercial ranches and allocated to individuals on 50 year leases (Mathuba, 2003). The policy 'encouraged large herd owners to move out of the overcrowded and overgrazed communal areas into fenced ranches, most of which were to be located on unused land in the sandveld' (White, 1998a). The policy claimed to '*protect... the right of every tribesman to have as much land as he needs to sustain himself and his family... Everyone benefits*' (Government of Botswana, 1975, in Peters, 1994). However, the policy itself did not contain procedures and sanctions to ensure this protection and cattle owners expressed concern at the implications: '*Fences will box us in... What will we do if there's a bush fire or a severe drought? We will have nowhere to go. There's no more land left*' (Cattle owners in the Kgatleng, quoted in Peters, 1994). In spite of considerable opposition to the TGLP, including public protests, the government went ahead with demarcation of commercial areas. The Reserved Areas, intended as a safeguard for poorer people, were never designated (Peters, 1994).

The Government of Botswana assumed that 1000 ranches could be established on vacant land under the TGLP. However, it was discovered through population surveys and adjudication meetings that much of the land newly designated as 'commercial' was in fact intensively used by people living in the communal areas and 'the planners' assumption that there were large areas of "empty" land [was] conclusively shown to be false' (White, 1993:22; also Peters, 1994). In addition, many people without cattle were also discovered to be living in these areas – both herders for cattle owners, and hunter-gatherers. The latter in particular (the San) were commonly overlooked and their ancestral lands on which they depend assumed to be 'unused'. The higher occupancy of the range than anticipated



Photograph: © Paul Weinberg

Farmer with one of his goats

inevitably led to conflict among claimants for land (Peters, 1994). A total of 476 ranches were originally demarcated, though by 1990 only 310 of them had been allocated (White, 1993).

The policy direction of the TGLP was reinforced and extended by the **National Policy on Agricultural Development (NPAD)**, issued in 1991. The policy restated the assertion that the growth in livestock numbers had caused significant overgrazing and rangeland degradation, and recommended the fencing of a large part of the TGLP communal areas as commercial ranches. NPAD was based on two further assumptions: that exotic breeds are more productive than the indigenous Tswana cattle; and that an ideal carrying capacity exists which requires stocking rates to be reduced in order to increase productivity. The fencing component of this policy took the privatisation of the commons to a new level: under the TGLP, land allocated to ranching was the so-called 'unused' land beyond the commons. NPAD targeted the land around water points – within the commons – owned by individuals or syndicates (de Queiroz, 1993; White, 1998a). A further 552 ranches have been demarcated to date under NPAD (Mathuba, 2003).

Borehole ownership continued to have a significant impact on the communal rangelands. As noted above, the cost of drilling limits ownership to either wealthy individuals or syndicates. Initially, many syndicates included poorer mem-

bers, but many have been squeezed out as they were required to make an equal contribution to running costs (rather than making a contribution based on usage levels, i.e. per animal watered) (White, 1993).

The 12 Land Boards established in 1970 are responsible for land use planning (including land and borehole allocation) in the tribal areas. The 11 members include a representative of the Chief, representatives of the tribe, members appointed by the Minister for Local Government, representatives of the District Council, the Minister of Agriculture and the Minister of Commerce (concerned with wildlife issues). Sub-ordinate land boards have been established in the larger territories (White, 1998b). The Botswana Land Boards have a reputation as a model of decentralised decision making over land² but their power has become increasingly compromised since the mid-1980s and there is now concern that they have undermined community management systems (White, pers. com.).

New thinking on range management in the 1980s and 1990s

During the 1980s and 1990s, a new understanding of range management was developed, challenging many previously held notions such as carrying capacity and range degradation. Much of this new thinking is summarised in Scoones' 1995 publication *Living with Uncertainty*. Scoones draws the important distinction between equilibrium and non-equilibrium environments. The former are characterised by gradual vegetation change and predictable rainfall patterns, where livestock populations are limited by the available forage and hence excessive numbers of livestock (i.e. above a 'carrying capacity') have a negative effect on vegetation. Non-equilibrium environments, in contrast, are highly dynamic, usually arid or semi-arid ecosystems with high rainfall variability. In these systems rainfall dominates the production potential of both grass and livestock, and hence livestock populations are limited by drought.

Understanding the different characteristics of these two system types leads to three key propositions on range ecology:

1. Many arid and semi-arid ecosystems are non-equilibrium, in which external factors such as drought (rather than stocking numbers) determine livestock numbers and vegetation status. Grazing has a limited effect on grass production over time and therefore permanent degradation is unlikely.
2. Flexible movement is crucial to maintain the productivity of African rangelands, which varies greatly over space and time.
3. African pastoral production systems are geared towards a number of different livelihood objectives which include milk production as well as meat. 'Therefore

2. For example, they were cited as a positive example for Africa at an Oxfam workshop on land tenure in Africa (Palmer, 1999).

blueprint interventions aimed at boosting single outputs (e.g. meat) using simplistic management tools (e.g. fixed carrying capacity) as part of standardised models (e.g. ranches) are unlikely to work (Scoones, 1995).

Scoones describes the process of 'tracking', matching the available feed supply with animal numbers at a particular site, and emphasises the importance of mobility for maintaining opportunistic tracking strategies. Access to land, and borders and boundaries form some of the key constraints to efficient tracking.

The new thinking on rangeland management, as summarised by Scoones and supported by a considerable body of research carried out throughout Southern Africa, directly challenges many of the assumptions on which the **TGLP** and **NPAD** were based. These include:

- **Communal rangelands are degraded and overstocked:** Much of the debate surrounding rangeland degradation centres on definitions. Abel and Blaikie – in line with the new thinking described above – emphasise the significance of irreversibility when discussing degradation and highlight the resilience of 'unstable' (i.e. non-equilibrium) environments and their ability to recover over time. Dougill and Cox studied land degradation in the Kalahari in the early 1990s and concluded that although significant changes in rangeland ecology could be noted following increased grazing pressure, they were not characteristic of irreversible rangeland degradation (Dougill and Cox, 1995).³
- **Ranching is more efficient than communal livestock production:** Rennie *et al.* claimed in 1977 that productivity per cow under a commercial ranching system could be twice that under the traditional 'cattle post' system. However, as noted above, this comparison is based on data from experimental ranches with high, non-economic levels of management. Furthermore, two other researchers used Rennie's data but redefined productivity to include milk for human consumption and draught power for ploughing (rather than just meat production) and changed the criterion to output per hectare rather than per animal. The results were that the traditional system was twice as productive as the experimental ranches (de Ridder and Wagenaar, 1984, quoted in Abel and Blaikie, 1990). Similarly Shackleton *et al.*, (2000) note that standard assessments of communal livestock systems account for only a quarter of the direct use value, by omitting milk, draught power, transport and manure, which in their calculations, based on studies across southern Africa, contribute more than 75% of annual benefits. This viewpoint is supported by White, who states

3. This is not to suggest that there are no problems associated with communal management systems, and Abel and Blaikie make a number of suggestions, including: progressive management fee to make it economic to manage smaller herds; assurance schemes and/or stock bonds to encourage destocking in drought; manipulation of quotas and prices at Botswana Meat Commission to encourage sales at the appropriate times; and government support to buy and restock to accelerate response to drought and post-drought conditions (Abel and Blaikie, 1990).

that productivity per hectare and per unit of plant biomass are both high in the communal areas and concludes that 'livestock in this zone are both biologically and economically highly productive' (White, 1993). These findings are reinforced by the body of data from elsewhere in Africa challenging the assumption that commercial ranching is more economically productive and more appropriate for Africa than traditional extensive systems (Scoones, 1995).

- **Meat production is the main focus of the communal rangelands:** As noted above, most households in the communal areas employ livestock production strategies aimed to satisfy a range of needs, not only meat production: 'farmers obtain one third of the calorific output of their herd from live animals which are sold (usually for slaughter). They obtain a further one-third in the form of milk, which they consume themselves (or distribute locally), and the balance is made up of home consumption of meat, draught power and transfers of live animals' (White, 1993). Furthermore, livestock are not the only way in which most rural households use the communal rangelands: many, especially lower income, families also practice hunting (wildlife) and gathering (fuelwood, construction materials, food, medicines) (Arntzen *et al.*, 1996).
- **Communal ownership of rangelands leads to mismanagement:** Many writers have challenged Hardin's theory that communal ownership leads to mismanagement and eventually overgrazing: 'studies of historical and contemporary forms of common property management in countries throughout the world conclude that there is no necessary reason for systems of common property resource management to be less efficient, less able to embrace technical innovation or commercial production, or less sustainable over a long period than any other property system' (Peters, 1994:6). Similarly, many studies of common lands have shown that in most cases there are structures and mechanisms for the regulation and management of the land, and that the 'free-for-all' implied in Hardin's article rarely exists (see for example the references to the Modisa in Botswana, cited on page 5).
- **Fencing the rangeland will increase productivity:** Flexibility of movement is a vital component of most 'traditional' grazing systems. In arid and semi-arid rangelands, 'the uneven distribution of rainfall spatially necessitates the movement of cattle from one location to another. This opportunity will be lost once all rangelands are fenced' (Arntzen *et al.*, 1996). Mobility is also significant to ensure that the full range of grass types are accessible to cattle: 'the arbitrary demarcation of paddocks is likely to reduce the ability of animals to obtain their nutritional requirements' (Abel and Blaikie, 1990).

3 The rangelands today



Cattle in the Botswana economy

Today, roughly half of Botswana's population lives in rural areas and occupies about 47% of the land surface under customary tenure for mixed farming of extensive cattle raising under the 'cattle post' system. Of the other half based in the urban areas, a significant proportion retains land rights in the rural areas (White, pers. com.). Since the 1930s, the national cattle herd has more than doubled, despite periodic decreases as a result of drought or disease, from 1,189,000 in 1934 to 2,696,000 in 1990 (White, 1998a). The livestock sector continues to support (through ownership or employment) a large proportion of the rural population and beef remains a significant earner of foreign exchange after diamonds (OECD, 2002).

The extent of commercial ranches

As noted above, the government initially hoped to establish 1000 ranches under the TGLP, but found the amount of 'unused' land to be considerably less than they had assumed. By 1990, only 310 of the original demarcated 476 had been allocated, while a further 552 have been demarcated under NPAD. In 2003, at a conference on land policy in southern Africa, a representative of the Ministry of Lands and Housing of the Government of Botswana stated that a total of 342 ranches have been allocated under the TGLP, and that 'a number' of the 552 demarcated under NPAD have also been allocated (Mathuba, 2003).

The slow uptake of ranch leases surprised the government and probably reflected the opposition to the TGLP at local level, as well as the slow rate of demarcation (Peters, 1994). In many cases, only the richest cattle owners, who had alternative sources of income, applied. The ruling party in Botswana gains significant support from wealthy cattle owners and includes numbers of them in its ranks. The links between government policy and benefits to this group appear clear: 'there is no doubt that some of the highly placed members of the government and party who promote the policy benefit directly as wealthy cattle and borehole owners' (Peters, 1994).⁴

4. The impact of TGLP and government policy towards the rangelands in general is discussed in chapter 4.

The performance of the ranches

Up-to-date information on the performance of the ranches is difficult to obtain in published form. Most of the available data relates to the early 1990s. In 1992, at a meeting hosted by the Botswana Society and the Ministry of Local Government, participants (who included senior government officials) concluded that 'the TGLP has demonstrably failed' and raised doubts about the further fencing of communal land required by the new agricultural policy (NPAD) (Peters, 1994). An evaluation carried out for the Ministry of Agriculture in 1991 stated that the majority of TGLP ranches were 'performing poorly' (Tsimako, 1991, in Peters, 1994).

The same evaluation noted that only 47% of the ranches surveyed had a perimeter fence, many had no water supply and many others had only one or two boreholes. Almost all exceeded the recommended stocking rate of 400 live-stock units: out of a sample of 15 ranches surveyed in Southern District, one had 270 cattle, and the remainder all had over 500. Of these, six had more than 800 cattle, three had over 1,000, and one had 1,244 (on a 6,400 hectare ranch) (Tsimako, 1991, in White, 1993). The evaluation concluded that the majority of the ranches were overgrazed and concluded that the premise underpinning the TGLP and NPAD, that 'granting exclusive rights' to land reduces overgrazing, is not being borne out in practice (Tsimako, 1991, in Peters, 1994).

Many of the ranches operate in practice as cattle posts, with little evidence of the improved practices which it was assumed would contribute to the ranches' increased productivity, such as rotational grazing, supplementary feeding, seasonal breeding and vaccinations, together with improvements in infrastructure (White, 1993). This probably reflects the ownership of the ranches – many are not managed commercially but as 'weekend cattle posts' by town dwellers who neither live on the ranch nor employ a proper manager (Adams, Kalabamu, and White, 2003; White, 1993).

Studies of the performance of the ranches have also noted the practice of 'dual grazing', whereby a cattle owner is not obliged to renounce rights to communal grazing on acquiring a private ranch. This means that many ranchers move their animals off the ranch onto communal land and back as they wish, thereby accessing a larger amount of grazing (and presumably additional sources of water) but at the same time increasing the pressure on the communal areas that the creation of individual ranches was supposed to alleviate (White, 1993).

Subsidies and support to the livestock sector

There is considerable debate about the level of subsidies to the livestock sector in Botswana. While the reputed figure of 50% of production costs is disputed by

some, it is generally agreed that 'government policies have made the livestock sector artificially attractive' (Arntzen *et al.*, 1996, citing Parsons, 1979, Picard, 1980, Hubbard, 1986, Hudson, 1981, Perrings *et al.*, 1990, Harvey and Lewis, 1993, Fidzani, 1993). The emphasis on the livestock sector in government policies may be the result of 'the dominance of the livestock-owning elite in government and the administration' (White, 1998a, see also Molutsi, 1993, quoted in White, 1998a) – 'there is no doubt that some of the highly placed members of the government and party who promote the policy benefit directly as wealthy cattle and borehole owners' (Peters, 1994). It takes several forms:

- *veterinary services*: veterinary drugs and vaccinations are largely free, and paid out of general tax revenue;
- *subsidies*: bull subsidies, artificial insemination subsidies and borehole-drilling subsidies;
- *indirect subsidies*: interest subsidised loans from the National Development Bank; tax advantages for livestock owners (losses may be written off against profits elsewhere);
- *land rents*: 'artificially low' TGLP ranch rents;
- *dual grazing*: the continuation of dual grazing rights allowing ranchers to move their livestock onto communal lands;
- *pricing policy*: beef producer prices have been artificially high as the Botswana Meat Commission's slaughter policy is geared to meeting the high-priced beef exports quota market such as the EU, and avoiding open but low priced markets (White, 1998a; Arntzen *et al.*, 1996; Arntzen, pers. com.; Adams *et al.*, 2002; White, pers. com.).

The World Bank has supported government policy on livestock development in Botswana, largely through its investment the three Livestock Development Projects, the second of which funded the TGLP. Peters notes that despite a number of reports highlighting the failure of the TGLP, there remained an 'apparently unshakeable belief within the Bank, presumably at high levels of authority, that the sole route to improvement of livestock and range management necessarily involved ranching on private land' (Peters, 1994). The EU has also supported Botswana government policy on ranching, in particular the further fencing of the communal rangeland under NPAD and continues to support the cattle industry in Botswana. Following the signing of the Lomé Convention, Botswana obtained preferential access to markets in the EU as well as subsidies (White, 1998a). This support from the EU helps to distort an objective analysis of the economic viability of the commercial cattle industry – as Peters noted in 1994, 'the commercial attraction of cattle depends on the continual negotiation with the EEC [now EC] for Botswana's preferential entry to the European market'. An additional factor is that ranches enable animals to be traced from the land to the abattoir,

which is difficult to do in the communal areas but which is becoming an EU requirement. This is likely to increase the government's commitment to the development of cattle ranches in order to continue to secure European markets for beef (Arntzen, pers. com.).

Land tenure and the land market

The result of post-Independence land policy in Botswana is a rapidly growing land market, as land is bought, sold and leased (Adams *et al.*, 2002). The number of annual market transactions of state and freehold land increased by about 56% between 1992 and 2001, and tribal land transfers are also increasing. The Mogoditshane Sub-land Board, for example, recorded an increase of 93% in the number of property transfers (of peri-urban residential plots) per year between 1993 and 2001 (White, 1998a). However, certain sections of society are marginalised in this process, either because they are insufficiently wealthy or disadvantaged in law. These groups include women, the poor, marginalised ethnic groups and those affected by HIV/AIDS (Adams, Kalabamu and White, 2003).

A significant result of Botswana's policy with regard to privatising the communal areas has been the displacement of many people, particularly the Baswara (San or Bushmen). This subject is discussed in more detail in chapter 4.

The impact of the privatisation of the commons



While Botswana has a reputation for having made significant economic strides since Independence, there are concerns that *'development in Botswana has benefited the already better off – those from the powerful families who are politicians and civil servants, foreign and national businessmen, including those owning the freehold commercial farms.'* (Whiteside *et al.*, 1996). This is particularly true of the privatisation of the commons, in terms of economic, social and environmental impact, as discussed below.

Economic impact

No comprehensive socio-economic cost benefit analysis has been carried out on the impact of the TGLP and the fencing policy of the NPAD (White, pers. com.) and hence there is no up-to-date overview. However, a number of conclusions can still be drawn from the particular studies that have been carried out.

As noted on page 17, the livestock sector has been made artificially attractive to investors, through subsidies and other policy initiatives. However, this does not always apply to smaller herd owners. As traditional exchange mechanisms such as borrowing cattle, free use of groundwater and so on, have become less common, the costs of keeping cattle have increased. The growing pressure on the land also leads to increased labour requirements (as cattle may need to be kept at more remote locations) and to greater need for fodder during droughts. Borehole costs are usually paid per cattle owner, not per head of cattle watered, so owners of large herds can enjoy economies of scale inaccessible for small herd owners. Large cattle owners are also more resilient to drought than owners of small herds, as the former are not forced to sell all their breeding stock to survive, and can reduce the milk and draught power offtake from their herds in times of stress (Arntzen *et al.*, 1996).

In spite of the attractiveness of cattle ranching to investors, there is a common view that cattle ranches have not been successful economically, particularly when the subsidies and other support described in the previous section are taken into account: *'many of the ranches subsequently established proved to be economic failures, a pattern that predated the formulation of the TGLP and that typifies*



Photograph: © Paul Weinberg

Herder following his animals

livestock ranching projects all over Africa' (Sandford, 1983, cited in Peters, 1994). Even according to information collected by government officials, very few ranches have performed better than 'traditional' cattle posts on the communal rangelands (most have performed only as well as, or more poorly, than the 'traditional' systems) (Peters, 1994).

The data available for the World Bank's Livestock Development Projects (LDPs) support this view. For example, LDP 1, which aimed to establish cattle and sheep ranches in the western Kalahari, cost over US \$5 million and despite a projected yield of 21%, overran its costs by nearly \$3 million with a negative rate of return. A study of the ranches concluded that they were 'unprofitable, overstocked, and environmentally damaging' (Odell, 1980, quoted in Peters, 1994).

Rangelands are often economically undervalued, because analyses fail to take into account their multiple uses, focus on a single sector (such as livestock) and are geared towards one market product (such as beef sale or slaughter). A study focusing on three major uses of rangeland – livestock, wildlife and gathering – found that all three make a significant contribution to rangeland use, with gathering forming a third of all direct use. The study also found that non-marketed products such as milk also played a significant role (Arntzen, 1998). Data such as this shows that the opportunity cost of limiting land to single use should be taken into account when analysing the profitability of cattle ranches.

Social impact

Access to land

In principle, everyone in Botswana has equal access to land. Customary law entitles individuals to sufficient land to meet their needs. However, in practice this often means they are allocated land according to their ability to utilise it. This has resulted in some individuals accumulating large holdings of arable or grazing land, while others deemed unable to use land (through lack of resources, disability or lack of livestock) are denied access. For example, there is a disproportionate number of unmarried and divorced women with children among poor households who do not have access to productive land, because they do not have the means to use it. Furthermore, married women may be unable to access land in their own right and have to apply through their husbands, who have what is known as 'marital power' over household assets (White, 1998b).

One group that has failed to secure land to a great extent has been the Baswara (San/Bushmen), whose dependence on large areas of land for hunting and gathering is often overlooked and who are assumed to be unable to 'use' land for cattle or agriculture. This is in part a reflection of the government's failure to recognise the occupancy and use of what they assumed was vacant, idle or unused land (Peters, 1994:150). Many of their ancestral territories have therefore been allocated to Botswana or other groups for cattle ranches (Mitchelsen, 1995 and Gulbrandsen, 1994, cited in White, 1998b). Other minority ethnic groups, such as the BaKgalagadi and the BaLala have also lost access to land and resources they have depended on for many generations (White, 1998a).

A recent review of land policy in Botswana notes that the government is concerned about both landlessness on the one hand and land hoarding on the other, and suggests that existing laws are insufficient to prevent eviction from communal lands without adequate compensation or provision for those being evicted (Adams *et al.*, 2002).⁵ The 'Reserved Areas', originally planned under TGLP to provide for the poorer households in the future, were never demarcated nor allocated. Furthermore, the stipulation that no single person could be allocated more than one ranch was not implemented (Peters, 1994).

Overall, the most clear effect of the TGLP, according to one commentator, is 'facilitating the more wealthy and privileged among current users of the range to acquire legal (leasehold) rights to communal land' (Peters, 1994). It appears

5. The Land Policy Review was carried out by a team of consultants for the Ministry of Lands, Housing and Environment in 2002. The final report is still under discussion by the government. Oxfam has been granted permission by the Government of Botswana to post the 'Issues Report' on its website with the proviso that the Government takes no responsibility for the views expressed in it.

that the Land Boards, often quoted throughout Africa as a positive example of land allocation mechanisms, have contributed to this process and 'have actually widened inequity of access to grazing and disproportionately benefited large cattle owners' (Woodhouse, 2001).⁶

This situation is exacerbated by poor communication of policy decisions to rural households. One research group found that many rural communities are ill-informed about policy and some know nothing about the TGLP. At the same time, many of these people have a clear understanding of the implications and impact of policy on the ground: *'what is TGLP? I know nothing about it... Fencing of the ranches is not good when there is a drought. It's drought now. When the ranch is fenced the livestock eat all of the grass on the ranch so there is nothing left. If the ranch isn't fenced the cattle go out to graze and then things are better'* (PANRUSA, 2001c).

Conflicts

A number of commentators, including a government representative, have noted that land use conflicts have increased as pressure on land use grows and people are pushed to the margins and are likely to continue to increase in the future (Mathuba, 2003; Arntzen *et al.*, 1996). These conflicts take several forms:

- conflict between cattle and wildlife: competition over grazing, water and land; disease risk and predation (see page 23);
- conflict between cropping and livestock production/wildlife: crop damage (experienced by up to 80% of cultivators);
- conflict between livestock/wildlife and gatherers.

Drought and increasing limitations on natural resources exacerbate these conflicts (Arntzen *et al.*, 1996).

Growing numbers of cattle-less households

In 1994, Peters noted that 'national statistics indicate increases in the number of families with no cattle, in the number of small herds, and in the share of the national herd owned by the biggest owners' (Peters, 1994; see also Arntzen *et al.*, 1996). Richard White presents similar data: in 1974, 50% of households had no cattle, by 1991, this figure had risen to 74%. Among those who do own cattle, there are also trends towards the concentration of cattle in the hands of a wealthy few:

6. This may be a reflection of the fact that large cattle owners are disproportionately represented on the Land Boards (White, pers. com.)

Table 1.

Year	Rural households without cattle		Rural households with 1-20 cattle		Rural households more than 20 cattle	
	'000s	%	'000s	%	'000s	%
1981	61.3	51.6	27.9	23.4	29.8	25.0
1991	104.7	67.6	26.9	17.4	23.5	15.2

(White, 1998a, based on government statistics)

Livestock are an important component of the mixed agro-pastoral farming practised by many rural households in Botswana for centuries. As a result of the declining numbers of cattle, many poorer households are having to drop out of agriculture altogether, relying instead on itinerant casual labouring for their subsistence. In 1981, around 29% of rural households were not involved in agriculture. By 1991, this figure had risen to over 42% (White, 1998a).

Impact on wildlife

According to White, 'at Independence, Botswana had one of the largest surviving reservoirs of African plains game left on the continent' (White, 1998a). It is now commonly acknowledged that over the last 30 years there have been drastic reductions in the wildlife population (Adams *et al.*, 2002; Jones, 1999; Boggs, 2000; Whiteside *et al.*, 1996). For example, almost 80% of the wildebeest and zebra populations were lost during the 1980s (Boggs, 2000). These losses are attributed to a number of interrelated factors:

- Significant loss of land to livestock: much of the land occupied by wildlife in the 1970s is now given over to livestock production with very small populations of wildlife remaining (Adams *et al.*, 2002). This is largely due to the 'expansion of the cattle industry via boreholes in vast areas otherwise inhospitable to livestock and therefore reserved for wildlife' (Boggs, 2000);
- Growth of livestock numbers: this can be summarised as a 'strong inverse relationship between cattle and livestock densities. In other words, wildlife disappears from livestock invaded areas' (Arntzen, 1998);
- 'Veterinary fences': fences were put up to control the spread of livestock disease (in particular foot and mouth passing from buffalo to cattle) and have blocked migration routes. This has had a particular effect in drought years (Whiteside *et al.*, 1996; see also Boggs, 2000). The same restrictions arise from the erection of ranch fences;
- Drought has had an impact on wildlife populations, particularly in conjunction with the limitations on movement described above (Jones, 1999).

Other factors include: poaching and over-hunting; growth in human population; mineral exploration and the growth of the tourism industry (Jones, 1999; Boggs, 2000).

As a result of these factors, wildlife is increasingly restricted to protected areas, which are not sufficient (in size or nutritional value) to support the current numbers of wildlife without seasonal movement. It is probable therefore that wildlife numbers will decrease further in the future (Jones, 1999).

Conclusions and key questions



This section summarises the main conclusions from the above findings, and identifies some key questions and issues for further investigation.

Conclusions

1. The process of privatising the commons in Botswana has its roots in the advent of borehole technology which enable individuals and syndicates to claim private ownership of water sources, and slowly by extension to the grazing around them.

2. Government policies (notably the 1975 Tribal Grazing Land Policy and the 1991 National Policy for Agricultural Development) promoted commercial beef ranches through demarcation and fencing of communal land, in response to a perceived problem of overgrazing and degradation due to communal tenure.

3. However, the ranches have failed to produce the anticipated economic gains, particularly if government support to the livestock sector (such as subsidies and artificially low rents) is taken into account.

4. Government policy and the process of privatisation in Botswana has been based on a number of premises which have been successfully challenged in the last two decades:

- the now largely discredited theory (the 'tragedy of the commons') that links communal resources with mismanagement and ignores (and ultimately undermines) customary natural resource management regimes;
- a failure to recognise and understand the multiple uses of the rangelands, which include hunting and gathering, livestock keeping for milk and draught power, and not simply beef production, which contributes to the mistaken concept of 'idle or vacant land';
- a lack of understanding of the vital importance of mobility and flexibility for efficient livestock keeping in non-equilibrium semi-arid environments.

5. A number of the mechanisms designed to protect the poor (such as the Reserved Areas, limitations on the number of ranches owned by an individual,

enforcement of stocking rates by the Land Boards, addressing the issue of dual grazing) failed to be implemented.

6. The benefits of the privatisation of the commons have mainly been concentrated in the hands of a small number of wealthy cattle owners, an elite consisting largely of members or supporters of the ruling party. Economies of scale have enabled owners of large herds (whose number is decreasing) to maximise any benefits from the commercialisation of beef production on the rangelands.

7. Poor rural households in Botswana have mainly been the losers in this process. Many have lost:

- access to land and/or been permanently displaced;
- access to the benefits of the government's support to the livestock sector;
- their livestock (the number of cattle-less households is increasing);
- their livelihood (many San have been displaced and some mixed farmers have had to leave agriculture as they cannot survive without a few cattle).

8. Botswana's wildlife has also been the loser in the process of privatising the commons. Coupled with the erection of veterinary fences, the creation of cattle ranches and the promotion of beef production with the consequent growth in the national herd has resulted in a massive and continuing decline in Botswana's wildlife populations, with serious implications for the national tourism industry.

Key issues for investigation

This literature review has drawn on a wealth of materials on Botswana's experience with rangeland policy – from academic research to official documents. The key conclusions outlined above are based on data from these materials. However, this review has also revealed an overall lack of up-to-date information on the socio-economic and environmental effects of Botswana's rangeland policy and on other related issues. Indeed, most of the studies quoted in this literature review date back to the 1990s. There is a clear need for a new assessment of the experience, based on fresh fieldwork and data collection. Below are just a few examples of gaps in available information, which further research should try to address.

Economic analysis:

- Current figures on the number of operational ranches, size of ranches, stocking levels and profitability are difficult to obtain at national level. Local investigations (for example at District level) may produce some up-to-date information on this topic, including the number of ranches that are still operating/have gone out of operation;

- Up-to-date information on the extent of subsidies to the livestock sector and therefore the 'real' economics of commercial beef production, including international development aid (e.g. the World Bank);
- The cost to Botswana and international finance institutions of addressing the resultant poverty issues (e.g. conflict, loss of livelihoods, unemployment, resettlement, health services).

Rangeland policy:

- Why the 'new thinking' on rangeland ecology has failed to impact on government policy thus far;
- Government officials' current assessment of Botswana's experience and the export potential of the 'Botswana model', in particular key lessons learned;
- Where NGOs and civil society stand on the rangeland debate and what impact their work has had;
- What is the continued rationale for World Bank and EU support for the Botswana beef sector.

Socio-economic impact:

- Current impact data, for example based on interviews with communal rangelands users, including those who have been displaced, those who have lost their cattle, and those who are continuing to draw their livelihoods from the cattle post system;
- What initiatives the government have undertaken to mitigate the negative effects of the TGLP and NPAD on poor households.

Environmental impact:

- Up-to-date figures on the impact of the decline in wildlife on the tourism sector;
- Information on the water table and the impact of the spread of boreholes;
- What current activities are being undertaken to safeguard the rangeland for future generations.

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Co-govern brings together institutions working on the governance of common property resources (CPRs) in Europe and Africa and has three main objectives:

- To examine the changing status and availability of CPRs in Africa, and to review experience with different forms of institutions for managing these resources.
- To investigate current processes of legislative and policy change affecting land and CPR management in Africa, and to identify how lessons from local practice can inform and influence policy design and implementation.
- To share information, experience and ideas on land matters and CPR management across Europe and Africa.



Co-govern pursues these goals by building on the research and networking activities of its partner organisations, by providing opportunities for dialogue and exchange and by supporting the dissemination of knowledge and information.

The programme involves seven partner institutions: IIED, which acts as programme coordinator; Caledonia Centre for Social Development, Scotland, UK; Noragric, Norway; Roskilde University, Denmark; Programme for Land and Agrarian Studies (PLAAS), University of the Western Cape, South Africa; Resource Conflict Institute (RECONCILE), Kenya; GRAF, Burkina Faso.

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