

The Dynamics of Cattle Farming, Bovine Disease and State Intervention in North West District of Botswana, 1966-2000

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Abstract

At independence in 1966, livestock formed the basis of Botswana's rural economy with many Batswana dependent on it for their subsistence. Thus, on the eve of their departure, the British colonial authorities had drawn up a Transitional Development Plan which strongly recommended that the incoming independence administration embark on massive development of the cattle industry. This article analyses the historical development of the cattle industry in the animal disease prone North West District or Ngamiland. It points out how modernising institutions created by the post-independence government transformed the industry and how, conversely, this development trajectory impacted on the small holder farmers, contributing to widening the enduring class disparities between cattle barons and subsistence cattle farmers in the area.

Introduction

Literature on the political economy of the cattle industry in Botswana abounds, ranging from the traditional role of livestock in the predominantly rural economy, to debates on 'modernisation' of the cattle industry, covering the pre-colonial, colonial and post-colonial periods (Tsikata and Hitchcock 1987; Hartland-Thunbeg 1978; Hubbard 1981; Peters 1994; Vivelo 1977; and Steenkamp 1991, Morapedi 2004 and Mazonde 1985). The ideology of 'modernisation' in the post-independence Botswana state bureaucracy was conceived by the administrative elite that sought to 'reengineer' the various sectors of the Botswana economy along scientific lines (Mayende 1993). Commenting on the Tanzanian forced 'villagisation' and Soviet collectivisation, James Scott (1988), discusses 'reengineering' in the context of what he terms 'high modernisation', which is essentially state initiated social engineering. These socio-economic elites, he avers, believe in 'scientific and technical progress' and in significantly breaking with traditional practices. Central to high modernism is the tendency of the state to be authoritarian and its ability to 'use full weight of its coercive power to bring these high-modernist designs into being', usually on a weak civil society that is incapable of resisting the imposition.

In Botswana, Olufeni Vaughan (2003) credits the first generation of leadership of the Botswana government, which was dominated by a cattle-owning political leadership with deliberately creating an elite comprising an informal coalition of chiefs, wealthy cattle owners and a modernising urban elite of top civil servants or technocrats, with a sharp focus on production for the international beef market. A political scientist at the University of Botswana, Zibani Maundeni (2002) concurs, adding that by co-opting traditional leaders into modernising institutions, forging alliances with the intelligentsia and finance institutions and restricting labour movement, the post-independence government produced a developmental nationalism centred on cattle accumulation and focusing on accessing the beef market abroad. A corollary to this are works on the vulnerability to the vagaries of bovine diseases in Ngamiland and its Okavango sub-district and that efforts at disease control were in the context of meeting the demands of the export market (Tlou and Campbell 1997).

Notwithstanding, little is said about the effects of the modernisation of the cattle industry on ordinary subsistence cattle owners who make the majority of the population in Botswana. Jacqueline Solway (1979) focusing on cattle farming in Dutlwe, a small village in the Kweneng District, argues that while a source of cash income, a market-oriented cattle industry also impacted negatively on traditional socio-economic

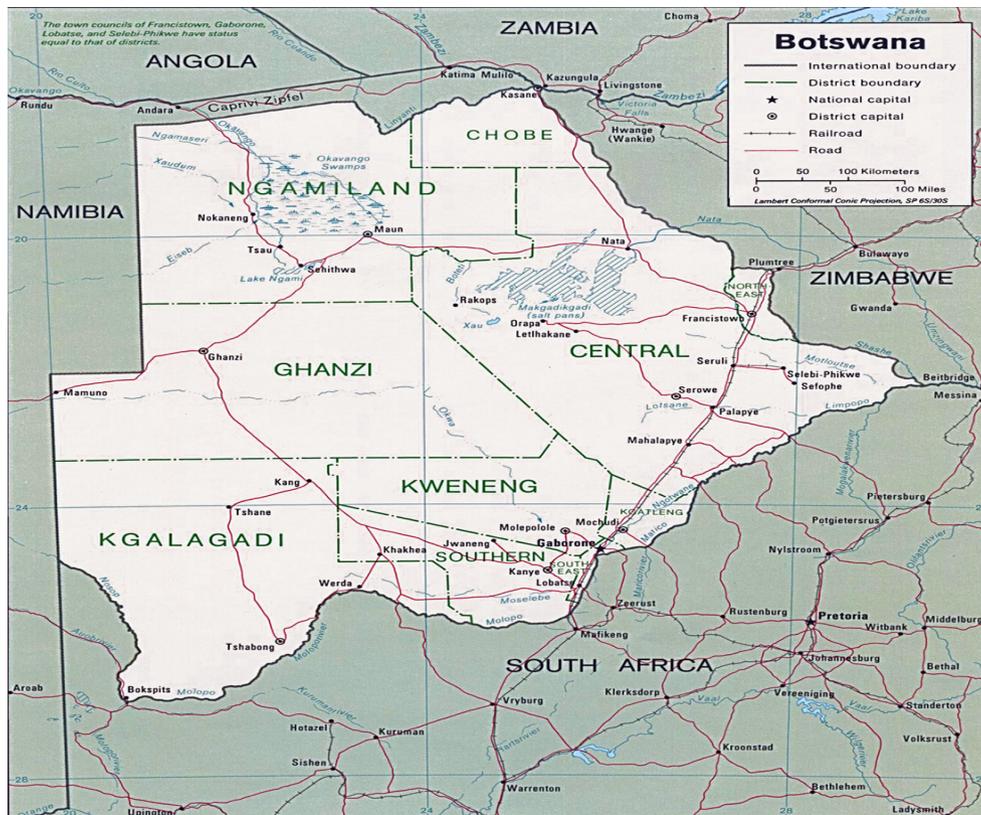
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aspects of rural livelihoods. Specifically, she points to negative social effects such as malnutrition resulting from loss of milk, as cows are milked less to allow for calves to grow faster and be marketed and draught power. That said, the objective of this article is not to dispute the country's success in building a robust cattle industry that today is ranked third in Botswana's export trade (Seleka and Kebakile 2017).

Rather than reproducing arguments on the rationale for a strong cattle industry which have become many writers' repertoire, the present article seeks to investigate the spaces and experiences of the smaller farmers amid the mega projects, an aspect that has been missing in the historiography of the cattle industry in Botswana. The article not only builds on the existing literature but also establishes a greater understanding of the subtleties in the processes of the modernization of the cattle industry. The focus is on how in attempting to improve cattle production, some state institutions, policies and remedial actions on range management and disease control precipitated and increased inequalities between large cattle ranchers and the rest of subsistence farmers in Ngamiland.

Ngamiland covers an area of 109,000 square kilometres (Map 1). The district is richly endowed with rangelands and wetlands. It also hosts the globally famous Okavango Delta which is an international heritage site and thus a tourist attraction. The physical landscape and ecology of the Ngamiland provides a paradox. On the one hand, there is an abundance of surface water from the Okavango River, the swamps and floodplains in the periphery, and Lake Ngami which are natural endowments which other regions in Botswana do not have. On the other hand is an arid Kgalagadi sandveld with an acute scarcity of water. The district suffered recurrence of cattle diseases of different kinds over time with severe consequences on livelihoods (Republic of Botswana 1999). These included fatal bovine diseases such as the bruising trans-boundary Foot and Mouth Disease (FMD) (Falconer 1971). In 1995, Ngamiland was struck by arguably the most devastating cattle lung disease in the area, the Contagious Bovine Pleuro Pneumonia (CBPP) requiring government to cull all cattle in the district as a preventative measure (Amanfu *et al.* 1998).

Map 1: Map of Botswana showing the location of the North West District/Ngamiland



Source: <http://www.geographicguide.com/africa-maps/botswana.htm> accessed 10 June 2018.

Development Plans for ‘Cattle capitalism’

‘Cattle capitalism’ here refers to transforming cattle value from a traditional utility political economy into a commodity-based asset and item of trade. Following the nineteenth-century commoditisation of cattle in Botswana, an aspect of capitalism, and the recognition of the potential of cattle’s contribution to the country’s weak economy in the early years of independence, government subsequently engaged in technological developments in the livestock production, as a drive for economic development. The move was aimed at kick-starting the commercialisation of livestock for exchange values, thus increasing profitability and boosting the economy. From 1966 the state engaged in central planning, prioritising commercial production of cattle development as the major potential for rural livelihoods and export earnings (Republic of Botswana 1977). The successive development plans covered the next five years at the end of which there was always a review of progress made as well as constraints encountered, with a view to rectifying any sectoral backlogs ostensibly monitoring the implementation of planned programmes. Accordingly, successive development plans recognised the growing income from cattle and emphasized increased infrastructural investment and expansion of extension services in the rural areas. To this end, government strengthened the Ministry of Agriculture and a Division of Livestock Production which was sub-divided into various units dealing with specific aspects of animal husbandry. The Animal Health and Disease Control dealt with disease control, the Department of Agricultural Research conducted research on livestock, and Livestock Advisory Centres (LACs) provided drugs and vaccines for livestock.

Because the independence government inherited a weak economy, it entered into carefully negotiated agreements on development funding with international finance institutions in order to kick-start development projects. For example, in 1967 OXFAM and Christian Aid funded the construction of the Botswana Agricultural College (at Sebele near Gaborone) where agricultural extension officers were trained. The United Kingdom Committee of the Freedom from Hunger Campaign supplied the government with 1,000 radio receivers for dissemination of information on improved agricultural methods and techniques to farmers countrywide (Taylor 2005). The ability to mobilise financial resources for the modernization of the industry was a contributory factor in legitimising the ruling elite, seen as providing the basis for rural capital in the form of cattle (Gulbrandsen 2012). Funded by the United Kingdom, LACs doubled up as convenient retail outlets for cattle owners in various districts for supplementary feeds such as bonemeal, and salt (Republic of Botswana 1991). Extension services were expanded countrywide, with many farmers quickly adopting new methods of livestock improvement. In 1967 the state introduced the Bull Subsidy and Artificial Insemination Schemes with a view to fast-tracking quality breeds (Mucheregwa 2016). Initially subsidised by government, the Bull Subsidy Scheme availed bulls to stock owners for half their original price.

Common wisdom on development in post-independent Botswana would suggest that essential services associated with rural development in post-independent Botswana would be distributed countrywide. However, while state structures provided extensions services and disseminated information to emerging farmers, by 1966/1967, they were restricted to the eastern watershed namely in the Ngwato, Kweneng and Ngwaketse reserves, excluding the wetland districts of Ngamiland and Chobe in the north. The post-independence government justified this omission by arguing that:

In the extensive areas to the west, Ghanzi, the Northern Crown Lands (Chobe) and much of Ngamiland it is of very little use to post Demonstrators [extension workers]. There are long distances between cattle posts, travelling is difficult in the heavy sand and nine times out of ten the owner is absent when the Demonstrator calls (Republic of Botswana 1967:14).

Extension services were only introduced to Ngamiland in the mid-1970s. To the chagrin of livestock farmers in Ngamiland and Chobe, in 1968, the state discontinued cattle sales on the hoof to nearby Zambia and Zimbabwe. These were historical markets for cattle from these northern districts. The argument was that the cattle route on hoof to these markets was strewn with disease vectors and efforts at containing the diseases were unsustainable due to the expansion of forests and wildlife (Child 1968). The post-independence government now re-directed all sales to the newly established Botswana Meat Commission (BMC) market in Lobatse, the distance of more than 1000 kilometres by road (Ministry of Overseas Development 1968). Trekking cattle on the hoof from the region to the Lobatse abattoir also exposed them to disease carrying parasites, predation by carnivores and occasional bolting into the bushes. The cattle consequently lost weight and became dehydrated due to poor grazing and inadequate water sources along the trek routes to the new market (McGowan *et al.* 1979). Consequently and not surprisingly, cattle from Ngamiland repeatedly fetched low prices at the BMC.

The National Development Bank: Spurring Agricultural Development?

The National Development Bank (NDB) was established in 1964 to assist commercial and industrial development with finance, and it had an 'agrarian emphasis: its immediate concern were citizen farmers' (Magang 2015:162). Funded by the American Development Loan Funds, NDB became an important source of rebuilding cattle herds especially after the 1966 drought (Good 2005). There is a strong view that in its operations, the bank deepened the divide between the rich and the poor (Makgetla 1982). For example, borrowing was dependent upon security, initially in the form of fixed assets, undoubtedly benefiting large cattle owners. Raising security for bank loans was a major constraint for small farmers. As Colclough and MacCarthy (1980) point out, the bank was not inclined to offer any loans to households that did not own cattle. Besides, NDB borrowers had to be recommended by extension workers 'who, for most of the period had effectively no contact with non-cattle-owning households' (Colclough and MacCarthy 1983:135). This scenario meant that not many small holders could secure loans and were, therefore, unable to buy cattle or invest in the improved management of their cattle.

In the 1980s, unsurprisingly, most farmers in the Okavango sub-district claimed not to have heard of the services of the NDB because of the remoteness of the Okavango and the largely small holder farmer dominance in the area in which the bank had no interest (Rashem 1988). Some of the few Okavango farmers who utilized the Bank did not understand bank operations and were surprised when bank officials informed them that they had defaulted on their payments as Rashem indicates:

At one time two officers from... NDB toured the area trying to persuade farmers to repay their loans. They were heavily attacked, verbally by one farmer who had obtained a loan and never repaid anything. How could they expect him to repay more than what he borrowed. The farmer was very upset that the NDB wanted to profit on him instead of helping him. When he obtained the loan he was told that NDB was there to help farmers. On each payment advice he got, there was interest charges, and [he vowed] that he would never pay (Rashem 1988:35).

In 1967, amid these colossal economic challenges, Botswana discovered diamond reserves that were to significantly transform the country's woes into fortunes with the revenue from the world's most popular gemstones. Capitalising on the 'godsend', the newly independent state embarked on large-scale infrastructural and other socio-economic developments in order to turbo-boost the economy. New institutions were established including those in the cattle industry. For example, in 1973 the Botswana Livestock Development Corporation (BLDC), a parastatal organisation was established to facilitate the marketing of cattle. In order to ensure quality product for the market, the BLDC purchased young beasts

from farmers for fattening before selling them to the BMC in Lobatse (Republic of Botswana 1989). Not only did the BLDC introduce a special dispensation for remote communal areas such as Ngamiland by paying cash immediately after the purchase, it also gave bonuses to producers during times of profit thus entrenching capitalist production.

The FMD Quagmire

Recurrent outbreaks of livestock disease added to the region's economic woes. Disease delayed the provision of essential extension services and impacted negatively on breeding programmes. As a result, there was no genetic improvement of breeds. An outbreak of the FMD in Ngamiland in 1977 resulted in the BMC suspending cattle sales in the district for two years under pressure from its major market, the European Economic Community, thus limiting cash inflow for the poor farmers and accentuating poverty (Holm 1982). On resumption of sales, beef sales in Ngamiland were consequently re-directed to markets in Southern Africa which paid much less (Republic of Botswana 1980).

In a bid to curb the spread of the disease, a network of 'buffalo' veterinary cordon fences that were erected by the colonial administration were extended to cover more areas in Ngamiland in order to stop contact between wild animals and cattle (Tawana Land Board nd: 7). The fences created a physical barrier that was intended to confine wildlife to the hinterland of the delta. However, and perhaps inadvertently, the fences cut off important grazing areas for cattle in the communal grazing areas, frustrating the poor livestock keepers (Republic of Botswana 1985).

Scott (1985) shows how oppressed peasants in South-east Asia rebelled against their employers using subtle strategies such as damaging farm equipment and sometimes withholding their labour. Similarly, faced with scarcity of grazing land resulting from the effects of cordon fences, some subsistence farmers resorted to destroying parts of the veterinary cordon fences in order to access pasture for their livestock (Personal communication with Paulos Nkoni 3 July 2008) They argued that they could not afford to buy feed for their livestock. Fences were also periodically destroyed by elephants. The damaged sections of the fences permitted wildlife and cattle to mix again, heightening the chances of transmission of the FMD. Local farmers were also irked by what they called 'double standards by government' wherein government officials subjected local communities to stringent disease control measures 'while tourists in the Okavango Delta were excluded from dipping their shoes in treated water' (*Mmegi Wednesday 1 August 2012*). In the circumstances, the vicious cycle of the spread of FMD and the negative effects on livelihoods continued.

Expectedly, increased funding and improved methods in livestock husbandry led to an increase in the cattle population and gave rise to concerns over the carrying capacity of range lands and the threat of environmental degradation (Republic of Botswana 1980). Cattle numbers increased from under one million head in 1966 after the devastating drought to three million in 1976 (Republic of Botswana 1977). Government responded to warnings of an impending ecological crisis by encouraging large cattle owners to drill new boreholes at the same time as providing state owned boreholes (Samatar and Oldfield 1995). Government also began to privatise some of its boreholes. According to Jack Parson (1979), these measures inadvertently created a 'stampede' for land and water sources which compelled government to introduce a new rangeland management policy, the Tribal Land Grazing Policy (TGLP).

The Tribal Grazing Land Policy: Incubating Inequalities?

TGLP, which was introduced in 1975, was designed as an instrument of herd management in Botswana. Drawing on environmental science, its objectives were to modernize cattle management through alleviating range degradation, increasing production and reducing inequalities in income in rural areas (Greenhow 1978). But Happy Fidzani (1998) disagrees, arguing that the TGLP encouraged 'primitive accumulation'. Fidzani emphasises that 'it is worth noting that accumulation per se does not automatically bring about

development' (Fidzani 1998:230). In order to reduce overgrazing and overstocking on communal range land, the TGLP re-zoned all communal land into three land use areas, namely, 'commercial', 'communal' and 'reserved' (Tsikata and Hitchcock 1987). The communal grazing area was to be maintained with traditional user rights by the majority of small herd owners. The commercial regime was turned into privatized rangeland enclosures for big cattle ranchers.

Pauline Peters (1994) provides a very insightful historical background to Botswana's land tenure, tracing it to the early 1930s. Being a highly arid country, the territory periodically experienced challenges of water availability. The colonial authorities collaborated with *Dikgosi* (chiefs or traditional leaders), advising them to form syndicates made up of large cattle owners. The state subsidised the costs of drilling boreholes whose use was exclusively by this class. The owners of the new boreholes excluded poor farmers from access, effectively marginalising the latter to struggle to find water for their livestock. Furthermore, the large cattle holders were quick to take advantage of private ownership of boreholes to mean granting *de facto* rights of control of grazing areas around their boreholes, including commoners' grazing areas (Peters 1994). This trajectory, inherited from the colonial administration, became the blueprint of commercialization of the commons, influencing the post-colonial state's wholesale adoption of the modernizing policies of the colonial state. Notwithstanding communal farmers' opposition to this agenda 'the wealthy continue[d] to monopolise range and water resources through controlling boreholes' (Samatar 1999:111-112).

A number of observers have noted that from its inception, TGLP sounded a death knell on small holder farmers. They argued that this land allocation trajectory clearly favoured rich cattle farmers and, in so doing, failed to address the problem of inequality –leading to a highly skewed distribution of cattle and wealth (Molosiwa 2013; Samatar 1999; and Leith 2005). Writing on the marginalising effect of the reorganization of rangeland under the auspices of TGLP among the Babirwa in Central District, Phuthego Molosiwa argues that privatisation, the promotion of individualised land ownership, was based on 'modernist narratives' that promoted western management practices that were unsuitable for the local circumstances (Molosiwa 2013:247-250). He also shows how government used environmental science to 'construct discourses of the irresponsible communal farmer and the state's betterment to legitimise its administrative control of formerly community controlled range resources' (Molosiwa 2013:247-250). Furthermore, Molosiwa notes that dispossessing Babirwa communal farmers of their grazing land exposed their herds to starvation, thus exacerbating poverty levels in the area, with local communal farmers' complaints unheeded by the authorities.

In the context of the policy, land transformed into commercial use was made available on a leasehold system to those who owned large herds. These were either individuals or syndicates. Reserved land was set aside for future allocation. Ranches in commercial areas measured 6400 hectares each and leases were allocated for a period of 50 years, renewable for a similar period (Frimpong 2009). All farmers with more than 400 head of cattle were required to move into commercial areas. Here they were expected to engage in improved methods of husbandry including rotational grazing, in line with the objectives of the TGLP to protect the environment. At the rate of about US\$25.00 (current rate) per year, rentals were in fact very low for large cattle holders.

In Ngamiland, 72 TGLP ranches were allocated in Hainaveldt to the south east of the district, modelling them on the colonial settler enclave ranches in the Ghanzi District (Morapedi 2014). Big cattle owners moved into this area during the late 1970s (Republic of Botswana 1979). Situated close to the main Maun-Francistown highway and conveniently placed for transportation to the BMC, Hainaveldt ranches boasted vast grasslands with a range of grass species that were ideal for cattle production.

Taken at face value, TGLP was the ideal rangeland management policy. However, government struggled with warding off perceptions that the TGLP was elitist and that in its implementation it represented

the interests of rich cattle barons (Werbner 1980). Nonetheless, there was evidence to support the view that the TGLP was a top-down bureaucratic arrangement that failed to meet its objectives and accentuated the class structure in the cattle industry. Nowhere is the bureaucracy's self interest in TLGP more illustrated as in the works of Gloria Somolekae (1993:113-122):

Because of self-interest on the part of the bureaucracy, it is both a participant and beneficiary in the policy process. Consultations conducted during the TGLP formulation process was nothing more than a formal exercise aimed at giving legitimacy to a policy that had already been decided.

Louis Picard had earlier indicated that in Botswana policy formulation, specifically the land policy, was dominated by a self-serving cattle owning state bureaucracy, a socio-economic elite that was intent on promoting its interest in the livestock industry. Writing on the relationship between the bureaucracy and the public policy formulation process, Picard stated that:

the bureaucracy as a class are both actors in the formulation of a public policy and major beneficiaries of the policy that have helped to formulate...the administrative and political elites designed changes in land tenure which would ultimately benefit these same administrative and political elites (Picard 1980:316).

Furthermore, poor enforcement of TGLP led to many abuses and land degradation surprisingly by rich commercial farmers. Many ranchers did not adhere to the terms of the lease while some were reluctant to cull their stock and their ranches were soon overgrazed (Frimpong 1995). Critics have frequently chided the Botswana government for poor policy implementation which has been viewed as a regular feature. Even President, Sir Ketumie Masire (1980-1998), in his address to Parliament in 1991 lamented that 'there is a growing gap between the establishment of policy and its implementation' (Lucas 21 February 2008 and Masire 2006). Some large holders did not move their herds from the communal areas as required by the policy (Dahlgren *et al.* 1994). Others refused to fence their ranches and a few refused to sign leases and claimed that they had always occupied the land they were on (Dahlgren *et al.* 1994). In Hainaveldt, the commercial ranches were actually run as ordinary cattleposts 'even when they were fenced' because cattle belonging to rich cattle barons moved in and out of the ranches, degrading rangeland outside the demarcated ranches (Republic of Botswana 1989:80-81). Absentee cattle owners allowed their stock to roam in communal areas. Some claimed additional cattle through the traditional *mafisa* system (cattle loaned to poorer farmers) to acquire extra grazing land (Peters 1994). In some cases, Land Board officials failed to collect money owed for the leasing of the ranches (Mannathoko 1997).

Thus, the TGLP failed to provide social justice to poor farmers. At the centre of all these challenges was the lack of monitoring structures 'that can accurately predict the implications of on-going changes and that can do something about them' (Green 1978:159-168). Opposition to TGLP was countrywide. In the Kgatleng District, for instance, as noted by Pauline Peters (1994), rejection of the policy centred on, *inter alia*, the district being too small for ranches and that privatisation and fencing were alien to the local people.

Marketing Infrastructure

Despite the imperfections of the TGLP, animal husbandry in Ngamiland improved. By 1981, cattle holdings here totalled 355,000 (Central Statistics Office 1981). Responding to the improved quality of cattle in the region, BMC built an abattoir at Maun in 1983. The Maun abattoir relieved Ngamiland cattle owners of transport costs and helped boost returns especially for small farmers. The availability of a market in their

midst motivated the small holders to improve their breeds. While the Lobatse abattoir marketed its beef to the European Economic Community, the Maun abattoir supplied local butcheries and also exported its beef to Mozambique and South Africa. Annual intake of the Maun abattoir between 1983 and 1988 shows a generally steady supply of cattle for slaughter. In 1983, the abattoir received 14,677 cattle and the following year the number increased to 17,493. In 1987, there was a further 4% increase, but 1988 saw a 17% decrease due to drought and the effects of vaccinations against the FMD (Republic of Botswana 1989).

Not surprisingly, not all cattle farmers in Ngamiland benefited from the new abattoir. Those in the deep and undeveloped riverine Okavango sub-district were cut off by poor roads infrastructure and remained little affected by the new opportunities offered by the beef market. The Okavango region is a challenging ecological zone for human movement. A wetland, it consists of the main Okavango River from which springs out numerous channels and floodplains some of which are seasonally inundated. There were no bridges across the Okavango River nor were there service centres in the greater Okavango sub-region.

‘Unsettling Narratives, Unsettled History’: CBPP Outbreak and Control Strategies

In 1995 the state faced one of the most difficult challenges it ever experienced in the livestock industry with the outbreak of a trans-boundary cattle lung disease namely the Contagious Bovine Pleuro Pneumonia (CBPP) in the eastern and western parts of the Ngamiland. The outbreak in Ngamiland exerted great impact on food security, nutrition and capital formation which cattle represented in the local economy. In an effort to eradicate the disease, the Botswana government destroyed all cattle in Ngamiland, totalling approximately 320,000, between 1996 and 1997 (Marobela-Raborokgwe 2011 and Masire 2006). The decision by the state to destroy all cattle created a quagmire. On the one hand, it achieved disease freedom and reduced disease risk, thus increasing the export potential. On the other hand, it dispossessed farmers of their entire herds, exposing them to poverty. The effects of the losses were on a colossal scale, both materially and psychologically. Most farmers were traumatised by the loss as many had an almost spiritual attachment to cattle.

Great strain was placed not only on the local economy but also on culturally important activities associated with cattle such as funerals and weddings. Leslie and McLeod (2001:39) note that ‘Within subsistence household, livestock represents both a direct and indirect consumable and saleable produce, and also a capital asset to be saved towards future production’. Also, there were significant losses of jobs and income with the closure of the BMC in Maun. The Maun abattoir had been the single largest employer in Maun before the outbreak of the CBPP. Thus, the loss of income gnawed at the fabric of their livelihoods. Criticism has also been levelled at the implications for food security in the area. For instance, ‘the eradication of CBPP in Ngamiland posed a serious threat to food and nutrition security in the area and contributed to a significant increase in malnutrition rates in children below five years of age compared to the rest of the country’ (Boonstra *et al.* 2001: 881).

Against these odds, some farmers in the more inaccessible Okavango River areas outwitted government officials by clandestinely driving their cattle across the border to relatives in neighbouring Namibia and waited to return them to Botswana after the re-stocking exercise (Marobela-Raborokgwe 2011). Concerned that most households were on the brink of poverty due to the cull, government intensified the provision of safety nets across the district. These included the labour intensive Drought Relief Programme; Destitute Programme, Remote Area Development Programme and Vulnerable Group Feeding Programme. Tellingly, there was increased enrolment on the Destitute Programme –resulting from the cull. In 1999, for example, there were over 12,500 CBPP victims enrolled for relief aid (*Botswana Daily News* 16 December 1999). Notably, these welfare programmes had very limited success and, instead, as elsewhere in Botswana, created a dependency syndrome that conditioned relief recipients to looking up

to government for their livelihoods.

Remarkable, though, is the seeming insensitivity on the part of the state when providing compensation to the cattle farmers, with an option of 50% cash and 50% re-stocking after the eradication of the disease or 100% cash. As would be expected cash was a big temptation to poverty prone small holders and many small farmers made a knee-jerk reaction by opting for the 100% monetary compensation. Given the traumatising effects of the cattle loss, it flies in the face of logic that in availing compensation government did not prepare the recipients psychologically. This was an indictment of government's failure to provide guidance and counselling on the desperate poor on how to use what to them, unsurprisingly, seemed to be a lot of cash:

The cattle owners found themselves with a lot of cash. While some farmers were given 50% cash, some of them opted for 100% cash. The increase in demand for consumer durables that resulted from the increased flow of cash from the CBPP project sources may have contributed to the relatively higher prices in the district (Republic of Botswana 1998:35).

Meanwhile, a government study on how this money was spent states that most of the compensation money was used to meet immediate household needs (Republic of Botswana 1999 and Boonstra *et al.* 2001). The study also shows gender and regional differences in the way the farmers spent their compensation money. Male headed-households tended to invest the money in relatively sustainable projects such as buying cattle and mini buses for the transport business. A few saved the money in the bank at Maun. Not so with most female headed households wherein there was more consumption expenditure than spending on investment projects. They tended to spend the money on food and clothing (Republic of Botswana 1999). But there were exceptions. One man reportedly confessed to spending the money lavishly and was frank about his lack of foresight: 'I had too many girlfriends. I never thought the money would finish. I was drinking expensive liquor which was not familiar' (Republic of Botswana 1999:6). Be that as it may, excessive drinking may also have been a result of stress levels emanating from losing their cattle. According to a government report 'Cattle were driven to crushes before being driven into trenches to be killed' (Republic of Botswana 2005:2). In some cases this was in full view of cattle owners, then buried in the bulldozer dug trenches. Table 1 below shows that it was the poorer communities in the Okavango sub-district, a remote rural backwater, that used compensation money on non-durable items, notably on food and clothing. The Ngamiland communities dominated those who invested in sustainable activities such as livestock and house-building (10% against 5% of the remote-based Okavango farmers).

Table 1: Percentage of Households and how they used CBPP compensation money, by District

Money Usage	Okavango %	Ngamiland %
To Buy livestock	4.5	5.7
Saved money	8.3	11.9
Food/Clothing	48.3	40.6
Down payment	2.5	1.1
Built House	5	10
Vending/Hawking	1.5	0.4

Source: Republic of Botswana (1999:38)

Some former cattle owners found work in the labour intensive public works set up by the government in Ngamiland to provide relief. Others relocated to the peri-urban villages of Maun, Shakawe and Gumare and engaged in the informal economy, taking up street vending and illicit beer brewing (Republic of Botswana 1999).

In 1998 the World Organisation for Animal Health declared Botswana free from CBPP infection (Marobela-Raborokgwe 2011). At around the same time, more veterinary cordon fences were erected as a CBPP control measure in the Okavango sub-district. Like the FMD cordon fences, the new fences produced mixed results. On the one hand, some residents embraced the fences as effective measures to contain the livestock diseases given that they were struggling to rebuild their herds after the CBPP cull (Republic of Botswana 1999). On the other hand, some farmers viewed the fences negatively as further reducing grazing rangeland and obstructing access to permanent water sources for their cattle. Independent scholars Michael Darkoh and Joseph Mbaiwa (2009) took issue with government for a fencing trajectory that put emphasis on wildlife conservation more than communities' livelihoods. They argued that farmers' plight was exacerbated by elephants that frequently destroyed the fences 'with the result that cattle crossed over into the cattle-free zones. Whenever this happened, they pointed out, the veterinary department officials killed all cattle, which crossed over the fence, ostensibly to control the spread of cattle diseases' (Mbaiwa (2009:65-74). They also note that 'ironically, buffaloes that crossed over the fence were driven back by veterinary department officials, and were never killed'. This thread of the complexity of disease, cordon fences and cattle farming has endured in Ngamiland, arguably with mixed results amidst state attempts at modernising the cattle industry.

Conclusion

This article has shown how the Botswana government after 1966 sought, through series of reengineering policies, to bring Ngamiland into the broader national strategy of cattle-led development. Government introduced strategic measures to manage rangeland as well as controlling disease and established a network of veterinary cordon fences to separate cattle from wildlife. The government also extended its policy on the demarcation of grazing and arable land to Ngamiland and intervened to provide relief when drought and disease epidemics led to acute economic frustration.

Nonetheless, Ngamiland remained marginal and highly stratified. Led by bureaucratic elites, the state's strategies tended to favour its class, the wealthier cattle owners leaving the poor with insufficient institutional support. Also, disease control efforts, often created a conundrum in that such efforts saved the cattle from fatal bovine pestilences while on the other hand, especially the CBPP lung disease, inadvertently created a parlous state of poverty following the complete slaughter of all cattle in Ngamiland. By 1998, 'ownership of cattle in Ngamiland was more skewed than before' (Boonstra *et al* 2001: 881).

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