

# **Farming the battlefield: The meanings of war, cattle and soil in South Kivu, Democratic Republic of the Congo**

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Prior to 1996 and the Congolese wars, exploitative land policies pushed farmers in the eastern highlands of the Democratic Republic of the Congo (DRC) into a vulnerable position, with cattle manure sustaining intensive cultivation. This exposed households to a complete breakdown in mixed farming as cattle became targets of war. This study of villages in South Kivu offers an inside understanding of continuity and change in farming practices in a region where there are no easy solutions, and assesses how the province lost its present and where farmers look when they glance to the future. For farmers, who hold a broad view of soil fertility, the casualties of war were not only people and cattle but also the land itself, which has enduring scars. Perceiving a rupture in tradition, South Kivu farmers are searching desperately for new livelihoods built on education instead of livestock, setting aside old ethnic signifiers to seek a future beyond protracted conflict.

**Keywords:** agriculture, conflict, Democratic Republic of the Congo (DRC), education, Great Lakes, livestock, soil

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## Introduction

Fourteen years of conflict in the eastern Democratic Republic of the Congo (DRC) have brought millions of farmers to the brink of disaster and have called for unbelievable survival strategies. The eastern highlands remains a broken land struggling to regain its future, while the mechanisms of its destitution persist, little studied. This work, based on field research in two Bashi areas of South Kivu province,<sup>2</sup> seeks to understand communities in crisis from the soil up, their historical locations and dislocations, and their hopes for, and actions towards, a new start. Farmers in the region have approached recurring disaster by reimagining a future very different from their past, in which educated children and new economic activities support the rehabilitation of a tired land and a damaged way of life.

The Kivus have been in a state of periodic violence and almost continual instability since 1996. The first Congolese war of 1996–97 soon spawned a second war in 1998, the largest and deadliest conflict since the Second World War (Turner, 2007). The International Rescue Committee (IRC)'s epidemiological team calculated in 2007 that the national crude mortality rate remained 57 per cent higher than the Sub-Saharan average; of the 5.4 million excess deaths estimated since 1998, 2.1 million occurred *after* the formal end of hostilities in 2002 (Coghlan, Berno and Ngoy, 2007). That the conflict did not end with the Lusaka Ceasefire Agreement in 2002 is clear in the *groupement*<sup>3</sup> of Burhale, south of the provincial capital of Bukavu. Residents there speak of a 'third war' in 2003, which was the most destructive by far. In April of that year, a Rwandan Hutu militia of the Democratic Liberation Forces of Rwanda (FDLR), along with the rebel Congolese Rally for Democracy (RDC), arrived seeking members of the Bashi militia Mudundu 40, a former ally. They wrought devastation on Burhale, burning huts, pillaging the hospital and school, and allegedly ordering the killing of all males over the age of five (Agence France Presse, 2003). It was in 2003 that the villages' deepest and freshest wounds were inflicted. In a 2006–07 survey<sup>4</sup> of 100 households, four experienced deaths, two suffered injuries, 20 were displaced, 18 abandoned their fields, and 27 lost goods to the ubiquitous looting. Many

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<sup>2</sup> This paper is the result of two months of field research by the author in April and May 2008 on behalf of the CIALCA, a joint project of three research institutes under the Consultative Group on International Agricultural Research (CGIAR). The paper also draws on quantitative data from the CIALCA's baseline survey of farmer households over the preceding year, covering 100 households in each *groupement*. While the author took a representative sample of 42 initial informants from the censuses drawn up for the baseline survey as a starting point for semi-structured interviews, none of these informants were respondents to the survey or had previous contact with the CIALCA. These and further network-sampled interviews with farmers, cattle owners, local traditional authorities, and non-governmental organisation (NGO) staff were conducted in Bukavu, Burhale and Luhahi.

<sup>3</sup> An administrative unit incorporating a number of neighbouring villages. Burhale is located in the *territoire* of Walungu.

<sup>4</sup> Unless otherwise indicated, all quantitative data is from the CIALCA baseline survey conducted across the region in 2006–07, including samples of 100 households from each *groupement*.

families fled to other villages or into the bush, allowing soldiers to use their compounds as camps and larders.

The sheltered lakeside *groupement* of Luhihi in the *territoire* of Kabare, meanwhile, was in the eye of the storm. Almost no households reported any losses or displacement. Its inaccessible location between Lake Kivu and a volcanic ridge protected it from most direct military conflict, leaving it to deal with refugees from far and wide, an influx of small arms and criminality, the dissolution of local markets, and the decade-long absence of the Congolese state. As extension services, health care, infrastructure maintenance, and other government programmes vanished countrywide (Nest, Grignon and Kisangani, 2006), even relatively peaceful villages, such as Luhihi, were left to fend for themselves while war raged elsewhere.

It is attractive to see this study as a comparison of two *groupements*, one affected by conflict and one shielded from it, with the purpose of measuring the toll of the wars. Such a framing implies that Luhihi offers a glimpse back at Burhale before the wars, or Burhale as it might now be in an alternate, peaceful world. This ‘natural experiment’ approach has a number of flaws. As Pottier (1999, p. 168) points out, ‘development narratives and discourses thrive on explanations marked by attractive simplicity’. This is seldom truer than in the sphere of post-conflict recovery, where the conflict is culpable for any given ill. It is easy to view South Kivu as a land torn apart by years of horrific warfare—which is undoubtedly the case—but the basic vulnerabilities that led to much of the suffering and household destitution during and since the wars have deeper roots, stretching back to before the collapse of President Mobutu Sese Seko’s Zaire and even to the colonial decades. In fact, many of the factors constraining the recovery of livelihoods in the region were well recognised long before the 1990s, although these have been joined by a new structural failure of mixed farming, which has rendered the situation even less sustainable. Burhale and Luhihi thus constitute not alternatives but rather complementary vantage points for viewing the direct and indirect repercussions of the wars.

### **Reconfiguring the Bashi world**

South Kivu, a diverse province even by the standards of the central African highlands, is home to myriad languages and tribal groups. The *territoires* of Kabare and Walungu, the focus of this study, are administrative regions formed after independence out of the colonial Kabare, which itself resulted from the melding of the four major kingdoms of the Shi (Schoepf and Schoepf, 1988). Consequently, one can say broadly and imprecisely that modern Kabare and Walungu *territoires*, along with the provincial capital of Bukavu, represent the traditional Bushi, lands of the Shi tribes. Aside from their language, Bashi identify strongly with certain types of food production: as summed up by more than one

informant: 'being Bashi means cows, bananas, and hoe farming'.

In the 1950s, Bushi, still bearing its natural cover of high grass, already supported 15–25 persons per square kilometre (Van de Walle, 1960). Cattle were kept throughout, their manure facilitating greatly reduced dependence on fallowing. While farming some homestead plots more or less permanently with manure, farmers also planted unfertilised outfields on a shifting basis (Miracle, 1967, p. 143). Frequently spread across less desirable bottom lands and steep slopes, outfields allowed for greater diversification of crops under varied conditions, an important mechanism of resilience (Van Acker, 2000). The flexibility of infield–outfield farming was reflected in traditional forms of land tenure. From the nineteenth century, local rulers, *Bami*, ultimately owned both land and livestock. Access was handed down through the hierarchy, regulated by kinship and clientship, with rents paid in labour, production, or both. A long-term, patrilineally inheritable contract known as *kalinzi* safeguarded rights to use land and tied tenants socially and politically to their chiefdom. For short-term cultivation of the sort practiced in outfields, landlords granted an alternative contract called *bwasa*, lasting for only a year or season. While *kalinzi* offered a source of secure land for establishing permanent farming, *bwasa* provided extra land for shifting agriculture, often on slopes or marshland.

The colonial and post-colonial history of South Kivu is a story of shrinking access to land for farming households.<sup>5</sup> During the half century of the Belgian Congo (1908–60), Bushi became a centre for plantation crops such as cinchona (for quinine), chrysanthemums (for insecticides), coffee and tea. Agricultural speculation began in Kivu in the 1920s, and by the start of the 1930s almost 20,000 hectares of prime land had been allocated for European plantations. The majority was in the *territoires* of Kabare and neighbouring Ngweshe, along the roads to Bukavu (Schoepf and Schoepf, 1988, pp. 107–108).

Post independence, in the 1980s, amid the profound economic crisis of the Mobutuist state, there was a renewed scramble by urban elites to secure wealth in land and cattle (Fairhead, 1990): in 1985, plantations occupied a reported 65 per cent of the best land in Kabare (Schoepf and Schoepf, 1988, p. 112). Ranches and plantations depended on, and created, cheap labour. Of 10,273 plantation hectares surveyed in Kabare in 1984, only 7,813 were used for commercial cropping (Van Acker, 2000). The remaining, generally unproductive, land was acquired as a tactic to monopolise access and to foster cheap labour (Fairhead, 1990), and was lent to labourers as payment—a new adaptation of the customary *bwasa* tenure system (Van Acker, 2000). Meanwhile, Kabare's population had boomed from 15–25 persons per square kilometre (including plantations) in the 1950s to 232 persons in 1981 (Government of Zaire, 1981): one of the densest spots in a very large country, which had an overall rate

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<sup>5</sup> For a thorough investigation of the crisis in land tenure, with the village of Burhale included in the case study, see Vlassenroot (2005).

of fewer than 15 persons per square kilometre at the time (Institut National de la Statistique, 1994).

The plantations remain conspicuous scars on the geography of the region today, all but inoperative since 1998, providing little wage labour in return for their occupation of valuable land (Vlassenroot, 2007). As a measure of stability returns, however, the resumption of agro-industrial activities seems likely, as in the quinquina fields of Burhale whose owner PHARMAKINA, a Belgo-German initiative of 1956, is gearing up again in French and German hands.<sup>6</sup>

### **The *Système D* of land**

Plantation farming in South Kivu has followed a dynamic of opportunistic cooption encoded throughout the Zairean state, famously sloganised in the apocryphal Article Five of the South Kasai Constitution: *débrouillez-vous!*—‘fend for yourselves’ (Wrong, 2001). This so-called *Système D*, the economics of survival, became the de facto organising principle of the nation under and after Mobutu. It was not a structured system so much as a sanction of improvisation, ad hoc alliance, and resource hoarding, excusing antisocial behaviour through faith in chaos and folkloric celebration of the clever *débrouillard*. While for some in the increasingly isolated Kivus it represented ‘an arena of escape from the predatory dialectics of Mobutu’s regime’ (Jackson, 2002), *Système D* was hardly a replacement for state infrastructure or customary land access. The *kalinzi* system had allowed broad redistribution of rents and the production of resilient social ties, public goods the new ‘system’ could not provide.

*Kalinzi* came to an end in 1973 with the introduction of a modern land law that ‘Zairianised’ the plantations and made the full value of rents available to all landowners, ushering in the true *débrouillement* of land. To capitalise land, chiefs had to eschew hereditary and patriarchal obligations; in many cases they simply declared the land vacant, thereafter selling it or turning it over to *bwasa* contracts. *Bwasa*, which permitted the extraction of a rent more commensurate with the land’s productive value, was the only customary arrangement to survive the changes of 1973 (Van Acker, 2000). The new buyers were the churches, urban entrepreneurs, national politicians and their patrons, and many of the *Bami* themselves (Fairhead, 1990). While giving up their role of stewardship, the *Bami* leveraged their social position well in the transition and remain key political and economic players. In uncertain times, they and the other elites aimed to store and accumulate wealth in land and often in cattle; ranching achieved a new popularity. As notions of land became individualised, the system of male inheritance fragmented plots and left many landless. For those with land, priorities shifted: *Système D* dictated that farmers capitalise in order to access services, so they began reserving the best and most secure homestead land for cash crops such as beer bananas while food crops drifted

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<sup>6</sup> See <http://www.pharmakina.com>.

to the more distant fields, frequently *bwasa* land. This new take on the infield–outfield farm offered none of the multi-varietal diversity of the old.

The changes wrought by land policies before the wars placed many farmers in states of extreme vulnerability, exploited by employers, tied to distant markets, and clinging to shrinking plots of second-rate land as they struggled to live up to the ideal of ‘fending for themselves’. The restructuring of land not only left households susceptible to the fallout of war, but also deepened the multifarious resentments that gave the conflict much of its ferocity, swelled militias with the landless, and in many areas (Vlassenroot, Ntububa and Raeymaekers, 2007) made control and destruction of the productive base key tactics of the war itself.

### **Cattle and conflict**

In times of protracted conflict, the most valuable of assets can become dangerous possessions. Expensive, portable investments that ordinarily serve to mitigate risk can attract the attention of military forces and looters (see Brück, 2003; Bundervoet, 2007). In South Kivu, cattle were once the definitive measure of prosperity and livelihood security. From 1996, however, soldiers, guerrillas and armed thieves preyed on livestock populations across the eastern Congo. The full scale of the loss has not been fully documented. In the 2006 CIALCA (Consortium for Improving Agriculture-Based Livelihoods in Central Africa) survey in Burhale, eight per cent of all households reported the plunder of their cattle in the conflict, a percentage nearly one-third the size of the current cattle-owning group. In Luhiji, with most of its cattle consolidated in sheltered pasture, no households reported losses to war. Informants in both *groupements*, however, spoke of livestock lost to disease during a time when extension services disappeared and medicine, if available at all, rose to impossible prices. These conditions largely persist in the region, and deaths continue. When a household keeps multiple cows and cannot access immunisations or treatment, sickness in one cow can easily lead to the loss of the whole herd, removing the household from cattle-raising altogether. Cattle owners invariably blamed the deprivations of the war for widespread disease mortality since 1996, a view congruent with the IRC’s attribution of more than 90 per cent of excess *human* deaths during the war to infectious diseases amid the destruction of health and sanitation infrastructure (Coghlan, Berno and Ngoy, 2007). Like the epidemiologists, farmers recognise disease as part and parcel of war.

When soldiers did seize cows in Burhale, the encounters were in a context of flight. Families that successfully fled with their cattle and continued to evade run-ins with armed forces were the ones that retained their livestock. Most families in Burhale fled the village at some point, especially in 1996 and in 2003, sometimes for a matter of months. With sufficient warning, they were able to take their

cattle with them or simply hide the cows in the bush. The landscape of war was unpredictable, though, and soldiers just as often encountered cows outside of villages. The accounts of pillage involve an impressive array of combatants and years, reflecting Burhale's position at a crossroads of protracted conflict. The toll on cattle added up as army followed guerrilla force year on year. Economic fallout proved another foe for cattle owners. The RDC and Rwandan forces burned down many compounds in 2003; two interviewees had to sell their cows after this, needing funds to rebuild and having no place to keep the animals. Another farmer had to sell two cows to pay for the upkeep of his remaining two. One informant had to sell his cow to pay off soldiers so they would leave his compound. Another basically sold his last cow to neutralise the risk after seven others were taken. The local market price reportedly fell from USD 250–300 per head to USD 50 during the worst years, so only the desperate sold cows for any reason. Disinvestment, on the whole, was not much better than outright loss.

The fallout also reached Luhihi, even in the absence of fighting forces. Waves of refugees from Bukavu and elsewhere temporarily increased land pressures at the expense of grazing and disease took its toll. Notwithstanding the *groupement's* relative calm, fears of an impending military occupation were and remain strong, making cattle an unattractive investment for the risk-averse. Most destructive of all, small arms flooded the area, bringing a plague of armed theft, which has only worsened, if anything, amid the present post-war lawlessness.

### **A cow on every farm**

The Bashi are defined by 'cattle, bananas, and hoes'. The ideal of a prosperous community involves 'a cow on every farm', providing manure, milk and an investment for the future. Bashi custom dictates the use of cattle for two significant exchanges: bride wealth; and buying land. Some land deals are still made with cattle—often a single cow for a plot of land, depending on the size and quality. Cash is accepted as well, but few farmers accumulate such quantities. Cattle are considered the surest route to land.

The symbolic weight of cows as bride wealth is much greater. At a minimum, the groom's parents can give a single cow or even a calf to the bride's family; now this is frequently supplemented with four to six goats. Some wealthy cattlemen in Bukavu reported giving or receiving up to five cows, including one man who married off three daughters in 1994 and 1995 and acquired 13 cows in all. In the villages, however, giving more than the single requisite cow has been almost unheard of since the wars. Another recounted that tradition, whereby the bride's family would gift the second calf born to the cow to the couple themselves, appears to have gone out of fashion. A new, and still controversial, practice of giving the cash value of a cow as bride wealth is said to have begun in Bukavu among urban

families that had no pasture to keep cattle. Since the wars, it has caught on increasingly in the villages as well. This is a point of much debate, and is ultimately more a matter of personal preference than tradition.

Those interviewees who considered it proper to give cows were, for the most part, already eager cattle owners. They stressed the prudence of having more cows and more manure. Others could not or did not want to acquire cows, whereas some saw greater opportunities in the flexibility of cash. Livestock prices have recovered in South Kivu in recent years, and cows are now valued generally at around USD 250 in the village and USD 300 in Bukavu. This is the amount usually employed as a 'cow' when bride wealth is offered in cash. In this situation all parties still speak of the gift as a 'cow'. Even when an actual cow is used, it is often just an intermediary. The groom's family may buy it specially for the occasion, and the bride's family may sell it, use it to buy land, or utilise it in turn to marry a son, passing it on to another household. It is common for poorer households to marry daughters and sons in pairs: young men have to wait for their sister to marry so they will have a cow to use themselves. Many cows are bought, sold and passed along without being fully integrated into mixed-farming systems. This is a seeming departure from the traditional role of bride wealth in reproducing cattle-owning households. Bride wealth has become a more dynamic exchange and now meets a greater variety of needs.

At the same time, 'informal' marriages with no or delayed bride wealth remain common, as they have been for many years. In North Kivu before the wars, Pottier and Fairhead (1991) noted that poverty and the decline in parental help made it normal for husbands to go without paying bride wealth in full for at least a few years. As a result, women in such marriages could achieve more leverage in the household during the period of independence. Poor informants in Burhale and Luhihi recounted similar arrangements, most often with the full cooperation of the couple's families. While some parents took the eventual responsibility upon themselves, others simply left it up to the son, letting one generation's obligation become the next generation's debt. One couple in Burhale lived together for 15 years and raised three children before the husband managed to seal the marriage. This is not to say, however, that investment in the future of one's children is being forgotten: education is increasingly filling this role. One farmer joked that he 'sold our cow to send our son to university . . . If he wants to get married, he can find a cow for himself, and support his parents while he's at it'.

Not everyone in South Kivu struggles to gain access to cattle. Members of economic elites—the most successful of the *débrouillards*—do accumulate large herds. Most of the largest cattle owners live in Bukavu and use cattle as an investment for income from other business activities such as mining and transport. They keep scores of animals on dedicated ranches or communal pastures far from the city.



They seldom sell cattle unless forced to, and usually leave milk and manure to those they employ as cow herds. Although some have done well in the post-war years, their large herds rarely came through the conflict untouched, and many lost everything.

Cattle owners of all sizes are willing to go to great lengths for secure pasture. In Luhihi, where armed theft is rife, patterns of herding have adapted to the local geography to minimise risk. Where cows were once kept in the compound and grazed on nearby hills, now cattle have been consolidated on pastures surrounding the village of Izimeru. This area lies on a peninsula to the south of the *groupement*, sheltered by volcanic hills on the remaining side with the only entrance through surrounding settled areas. The pastures are open access and most cattle stay here at all times. Informants estimated that some 50–100 owners keep cattle on these pastures, including many living in other villages. In addition to safety, the remote location keeps cows out of the way of crowded agricultural land, for which some farmers are willing to forfeit their share of manure. Herding has become a small industry in the village: owners can bring cow herds from outside, but then they have to pay extra for their accommodation. Boys from Izimeru are more popular for the job.

For young men in the past, the job of cow herd represented one route to cattle ownership. The arrangement was similar to that described by Depelchin (1974) in the 1970s between the Furiiru and Banyamulenge of Uvira, minus the ethnic dimension. A young man could hope to earn one of the calves born to his charges—usually the second, third or fourth—and use it to marry or to start his own herd. Assuming he had the connections to achieve such an arrangement, even the poorest young man could aspire to own cattle. Currently, the situation seems to have shifted; in both Burhale and Luhihi, the common rate of payment has settled at one goat per year. Some employers allow boys the option of collecting a calf after four or five years instead, but given their immediate needs and general state of poverty, typically they ask for the goat. Other forms of compensation, such as cash or corrugated iron sheets, are much less common but are beginning to appear. While these are all valuable assets for poor young men, the rising relative cost of earning cattle has all but closed this traditional access route to the world of cattlemen and the social mobility it offered.

Distinct from this vertical transmission of cattle there existed another custom of sharing cattle among equals, known as *bugabe*. This would take the form of anything from an outright gift of a cow from one cattleman to another, to preferential trade in a small number of goats, to a loan that would later be repaid with the original cow's calf. These varieties of informal arrangements pay tribute to a long tradition of reciprocal and clientist access to cattle, originally granted by the *Bami* (see Miracle, 1967, p. 176). Interviews in the present reveal that *bugabe*, too, has all but disappeared in the war, now that 'everyone is hungry and people have little sympathy'. The trading of cows for goats was based on

social capital that has not held up to the scarcity of cattle and their growing price differential against small livestock. These are said to have been arrangements ‘between friends’ and exist now, if at all, between social equals with a great many cows.

### **Life without cattle**

Since the outbreak of war, the social avenues to cattle access have severely diminished. Friendly *bugabe* has fallen by the wayside. Herding is given over to those seeking short-term gains, and even marriage is growing distant from cattle exchange, relegating it to a symbolic act or leaving it as a future potentiality. Land, the only resource matching cattle in value, can hardly be spared. Virtually the only option left is to purchase cattle directly on the open market, a difficult prospect for households producing at or near a subsistence level. Multi-threaded networks of access have given way to the singular challenge of accumulating financial capital.

To some extent, goats have taken the place of cattle in every arena but marriage, and even here many families now offer a few goats alongside a single requisite cow to round out bride wealth. Where cattle are scarce, goats have achieved a status of secondary but significant prestige, albeit without the trappings of Bashi male pride. If the decline of cattle raising is to continue, goats might come to replace cows in many of their social roles, at least for farmers of lower economic status. For the even poorer, pigs, rabbits and guinea pigs are standard currency; like goats, their value for most households is in storing, investing and multiplying small amounts of wealth. Nest, Grignon and Kisangani (2006, p. 104) pose that farmers made a particular shift to guinea pigs during the wars because they are easily carried when fleeing. These are also the three animals that most development initiatives and local cooperatives grant or loan to their beneficiaries, both for reasons of feasibility and because where cattle and goats connote wealth, pigs and rabbits are properly in the domain of the poor.

Small livestock have been a part of Kivutien livelihoods for generations and most certainly play a vital economic role in many households. As the sole remnants of a traditional mixed farming system, however, they fall short in providing inputs for farming. The enthusiasm for goats does not extend to their manure production; goat manure is not considered a valuable resource. Most goat owners add the manure to their household compost, but do not think of it as a major contribution and continue to suffer poor soil fertility. Whatever the shortfalls in the soil may be—evidently losses of phosphorus and magnesium, according to the initial analysis by CIALCA<sup>7</sup>—goat manure in available quantities does not appear to make up for them. Even informants who lost large numbers of goats did not cite this as a reason for declining productivity.

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<sup>7</sup> Personal communication with Dr Piet van Asten, Agronomist, International Institute of Tropical Agriculture, Bukavu, 5 May 2008.

This is what makes cattle more than just a symbol of wealth, male pride and Bashiness: they are the engines of productive potential in mixed farming as well as its visible embodiment. While the contribution of nutrients from one or a few cows may not be enormous, given the poverty of the soil and few alternatives, bovine manure is becoming one of the most valuable resources in rural Kivu short of coltan and gold. Without cattle, the only available nutrient inputs are small livestock manure, household and agricultural refuse, and ashes from kitchen fires—all of which farmers employ in every available scrap, but to little reported effect. In Luhiji, the most popular alternative fertiliser is the leftover mash from brewing banana beer, but even this exists in small quantities and is ‘something to use when there’s no manure’.

### **Soil and potential**

The modern Kivutien concept of soil is of something with little inherent merit; crops are grown on inputs alone. As one farmer of the younger generation explained when asked about the quality of a plot of land, ‘soil isn’t good—we make it good’. This is not to say variability in land goes unnoticed, but rather the breakdown of sustainable farming systems has progressed to the point where even once-fertile land, such as that found around much of Luhiji, is exhausted beyond the point of natural productivity. Land is most often typified as: a) incapable of producing certain crops well under any conditions, usually due to advanced erosion; b) capable of good production of certain crops with cow manure; or c) capable of some production even without manure. More important than location is skill in land management and the resources to carry it out.

Poor fertility impacts more than just yields; a plot’s productive potential constrains the crops that a farmer finds fit to grow on it, reducing cropping diversity for farmers with little access to fields. Most farmers stock their best fields primarily with beans, the staple protein with which they take no chances. On particularly good land these are frequently intercropped with maize or sorghum, otherwise with cassava or under bananas. Poor fields are given over to sweet potatoes; some consider a year or two under sweet potatoes to be a replacement for a fallow.<sup>8</sup> More often, however, sweet potatoes are just ‘the crop that will grow where nothing else will’.

Cattle manure being in limited supply, farmers who have it use it first and foremost to bolster yields on their better fields and any cash crops they may be growing. In the classic infield–outfield style, outfields tend to be remote and less fertile, frequently only planted with a mono-crop of cassava or sweet potatoes. Whereas these were once shifting long-fallow plots, however, necessity now forces them into cultivation every season, leading to extremely poor production. Fields held under *bwasa*

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<sup>8</sup> For a similar case of cassava being used as an ‘imitation fallow’ in Kenya and Uganda, see Fermont, van Asten and Giller (2008).

contracts in particular are seldom fertilised. This is not just a matter of low incentive, but of active disincentive: *bwasa* tenants have to walk a fine line with regard to their production to avoid drawing the attention of the landlord who might want to take the plot back. The safe strategy is just to plant a patch of cassava and leave it be.

Cattle manure was never traditionally sold or traded, and it is still an almost universal convention to use one's own. Informants laughed outright at the idea of selling manure; it is simply too valuable a resource. In Burhale there was only one household that sold manure. The couple owned four cows in a central village home to many associations and progressive farmers. Each year, they produced three or four piles of composted manure for their own fields and sold two or three to fellow villagers at USD 10 a pile. This couple did not enjoy excellent production of their own crops and probably would have produced better if they had used all that their cows provided, but it was a calculated sacrifice. This was their only possible source of cash to pay school fees.

### **Educating Kivu**

The family that sold their manure had done so for almost 20 years—as long as they had been paying for their children to go to school. Mobutu's government nationalised previously church-run primary and secondary education across Zaire in 1974, providing free schooling albeit at a generally low and underfunded standard (Federal Research Division, 1993). By the beginning of the 1990s, the government schools, like many remnants of the state, became defunct and parents had to turn to the new fee-supported ventures that quickly rose up in their place. Since then, according to the director of Luhihi's primary school, 'people value education, now that they have to pay for it'. Survey results do show very high school participation, much higher than education levels in the generation of respondents themselves: 67 per cent of female children in Luhihi and 86 per cent of female children in Burhale (home to a large girl's secondary school) were reported to be in school, as well as more than 90 per cent of male children. The average household with children in school paid roughly USD 22.50 a year in both *groupements* for fees, school supplies and uniforms; in comparison, in 2004, only 28 per cent of households surveyed in the Walungu region had a monthly income of USD 30 or more (Vlassenroot, 2005).

Independent of larger national infrastructure, the schools ran sporadically during the war years, but run they did. Families did what they could to keep up; while fewer than four per cent of respondents in the CIALCA survey said that they would consider selling a cow to buy food in times of crisis, three out of this study's own sample of 42 had done so quite recently to pay school fees. Others would use whatever assets they had at hand, often banana beer or goats, or work in others' fields. One

family, whose sole source of income came from small-scale banana production, used the profits to put their 10 children in school. ‘We can accept poverty’, they pledged, ‘in order to pay school fees’. Informants who had lost cattle and failed to replace them often said that they did not expect to own cows again, because now they had to pay school fees instead of saving up for animals. Cattle and education may seem like two very different investments, but to farmers the decisions are conceptually related, parallel and too frequently mutually exclusive.

While many parents explained schooling as an assurance that their children could take care of them in their old age, others offered a deeper meaning. ‘If my children go to school and learn to speak English’, one woman said via an interpreter, ‘they can talk to people like you directly. It makes me angry that someone else has to speak for me’. On a societal as well as a household level, schools are imbued with the capacity to transform. Asked about the future, another informant predicted that ‘there will continue to be war because the government paid for school when I studied and now they don’t. When people are less educated they can’t elect good leaders’. Education is a compulsion, a responsibility, and a means of entry into other, more modern worlds. Rather than investing in cattle and thus on-farm productivity, households are investing in education, which represents an attempt to participate in a modernity that exists outside of the context of war. Investing in school fees, while risky, is subject to a different set of risks from those threatening fields and cattle; looked at in this way, the mania for schooling is an extreme manifestation of the risk diversification strategies favoured in post-war periods. In eastern DRC, these strategies have famously extended to artisanal mining (Jackson, 2002), a venture also undertaken in Burhale but lacking the transformative power of schooling. In the case of education, it is not just a search for a new household activity but for a new way of life. What is sacrificed in this search is the traditional Bashi identity: the world of cows, bananas and hoe farming.

For Kivutiens, the wars contrived a total break with the past. The new status quo is either one of persistent chaos, or a new age of development born with the elections of 2006, depending on an informant’s personal perspective and dedication to optimism. Either way, this is a new era and calls for new livelihood strategies. With the traditional route to security, prosperity and status—keeping cattle—much less accessible, the new route is participation in modern activities, with Bashi pride submerged in individual success. The most popular activity by far is education, which is open to all who can afford school fees, if not necessarily to equal benefit. Mining for gold, trading, forming local business cooperatives, or seeking work in Bukavu or Goma are other potential ways out of subsistence farming, but these require greater access to social and economic networks, and no path carries any assurances.

In the face of such dedication to the reimagining of the next generation, it seems almost incidental to ask how school fees really pay off. In their study of the University of Kinshasa,

Munikengi and Sangol (2004) found that such institutions have survived amid economic crisis because they provided a means to capitalise on the social recognition associated with being an ‘intellectual’—a title akin to European nobility. By the 1990s, salaried employment was far from a sure thing even for holders of medicine and law degrees, but degrees still constitute a form of social capital. In fact, the end of free education undoubtedly rendered it all the more valuable. Two sons of Luhihi did, indeed, achieve advanced degrees and now are employed as professors at the Université Catholique de Bukavu. This presence of superstar intellectuals may contribute to that *groupement*’s enthusiasm for education, but in reality most families simply do not have the resources to carry their children even as far as secondary school. The undertaking remains an idealistic one. For the aforementioned couple of Burhale who sold part of their precious manure for 20 years to educate their children, the ultimate result was an eldest son with a teaching qualification who works at the local primary school. Even he does not yet provide the family with any income; he’s been teaching unpaid for several years, waiting for the government to offer salaried positions.

### **The tired land**

‘This is why schooling is important’, an elderly informant explained: ‘if children complete school, they can’t become just farmers’. To understand the lengths that farmers go to in the name of education, one must consider that for many, agriculture is a livelihood given up for dead. The most frequent descriptions of the soil are ‘old’ and ‘tired’, references to both its nutrient content and to the way of life it once supported. The tiredness of the land is not a simple biophysical state: erosion, loss of fertility, and disease are all symptomatic of a general decay of potential. Cassava mosaic virus, for instance, has permeated the region and is visible in many plots; farmers know the disease by name and blame it for generally poor yields in multiple crops, classifying it alongside other ills of the soil. One farmer ventured the theory that mosaic ‘deposited something in the soil which made it poor’. Also thought to be acting on productivity through the medium of soil, surprisingly, is the conflict. ‘Before and during the wars we had good production’, another farmer noted, ‘but now it’s become bad because the arms had an impact on the soil. A mortar fell near our fields and this ruined the soil. To fix the problem I could use manure, but we don’t have a cow’. Here, war and livestock are set against one another in the domain of soil. Mosaic too, which followed on the heels of the conflict, was suspected of collusion with the enemy. Informants did not present a clear idea of the process through which these impacts acted, but accustomed as they were to being targeted by military forces, they had suspicions; the soldiers ‘did something to the soil when they passed’. Along with people, animals and property, the land itself became a casualty of war.

Researchers recognise that farmers often perceive soil fertility in broad terms, as a complex process culminating in the growth of their crops. The management practices within their control, and environmental conditions without their control, constantly generate or deteriorate soil fertility, and are at least as important as the persistent properties of the soil itself. In any given season, a soil's true fertility is a function of its past and present management, and judged as such. Desbiez et al. (2004) propose the term 'field fitness' as a better representation than soil fertility, with its specific biophysical and mineralogical factors. Farmers assess fields 'using a range of indicators which they can actually see or feel, including crop yields, soil depth, drainage, moisture, manure requirements, water source, slope, and weed abundance' (Desbiez et al., 2004, p. 206).

Given the emphasis of 'field fitness' on management and outcomes, on providing the conditions for growth, farmers are not actually mistaking pathogens for nutrient deficiency or erosion for the scars of conflict. In this holistic perspective, the entanglement of war, disease and cattle in the domain of soil makes sense. To say 'the soil is tired' describes the totality of a profound post-war exhaustion: social, economic and environmental.

## **Conclusion**

This paper began by making a case for long continuities in land exploitation in South Kivu, following a pattern of fragmentation, increasing density, and industrial privilege through one of the twentieth century's great stretches of malignant history. In subsequent sections, however, farmers themselves emphasised not continuity but rupture from pre-war livelihoods. The potent symbol of this is the cow, first among the three possessions that define traditional Bashiness. With the ideal of 'a cow on every farm' now ringing hollow, the Bashi are having to re-imagine themselves in a more competitive, resource-diminished world. The 'tired' soil is both an agronomic reality and a second symbol of change, encoded with all of the frustrations and diminishing returns of agrarian life.

To the misfortune of farmers, continuity and rupture are not exclusive. Households are trapped between the legacy of the past in the allocation of land, and a present without the synergies or social structuring of mixed farming. Dismaying of this, many are turning to the future instead. The new realm of modern activities completes the break with the poisoned past, leaving behind the risks and constraints of the farm, albeit for new games with long odds. Most commented on has been artisanal mining, a starting point for a number of studies, such as Jackson (2002), to which this paper might be read as a prequel. More evident in Burhale and Luhihi, however, is the primacy of education, an expensive but compelling means of entry to a modern world free from violence.

Having accepted, even embraced, the break with the past, Kivutiens have high expectations for

coming development. Practitioners of development would do well to investigate both the damage caused by conflict and the greater continuum of Kivu's history. The most relevant guidance comes from post-conflict writers of the holistic (and inevitably difficult) school, such as Longley, Christoplos and Slaymaker (2006): that agricultural rehabilitation recognises structural constraints outside of the conflict, that the protection and promotion of rural livelihoods be an inclusive process extending far beyond new seeds and tools, and that rural people not be pinned down as farmers and farmers alone.

In the Congo as elsewhere throughout history, wars are disasters on already fragile social and environmental terrain. War can nonetheless bring changes like nothing else, including to the relationship between people and the land, and perhaps a self-fulfilling idea of historical dislocation. If and when new development arrives, it remains to be seen whether agriculture and agro-pastoralism have a role to play in the new Kivu or whether they continue to be marginalised. Given the ultimate continuity in South Kivu, the need for people to feed themselves, one can only hope that farmers find the strategies they need to bring their occupation back from the edge of possibility.

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