



Environment & Society Portal



The White Horse Press

Full citation: McGregor, JoAnn. "Conservation, Control and Ecological Change: The Politics and Ecology of Colonial Conservation in Shurugwi, Zimbabwe." *Environment and History* 1, no. 3, Zimbabwe special issue (October 1995): 257–79.
<http://www.environmentandsociety.org/node/2851>.

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Conservation, Control and Ecological Change: The Politics and Ecology of Colonial Conservation in Shurugwi, Zimbabwe.¹

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SUMMARY

The transformation of rural societies and their strategies of resource use in the colonial period was the outcome of contestation, negotiation and alliance on a number of different levels. Conservation ideas and policies have played an active part in this process, shaping as well as reflecting the nature of colonial rule. Though the appeal of conservation lies in invoking mutual benefits, the history of its implementation in Zimbabwe is one of authoritarianism and discrimination. For settlers, conservation entailed financial and other incentives: for Africans, it entailed coercion and punitive restrictions on resource use. Conservationist alarm provided not only a justification for state intervention, but also a legitimisation for using force. Focusing first on official discourse and the conflict which accompanied the passage of early conservation legislation, this article then looks at the different interpretations of the effects of implementation in Shurugwi communal area. Shurugwi was particularly significant because it was the testing ground for early state interventions and was upheld as a model of successful state 'development' – a representation which allowed for the (forcible) reproduction of the same policies in different ecological contexts around the country.² Policies justified as conservationist provoked some of the most widespread rural resistance³ and also created new environmental problems. Where local leaders welcomed state conservation interventions, they often did so for different reasons than those officials intended: adoption was not necessarily an endorsement of the policies' technical value. As legitimate political authority at local level was tied to maintaining the fertility of the land, disputes over conservation were at the same time struggles over local authority. Such disputes drew on notions of the relationship between nature, community and ancestors which differed significantly from the 'autonomous' view of nature enshrined in natural science.⁴ Although local environmental knowledge is often more detailed and commonly incorporates a more accurate understanding of local conditions than officials' technical ideas, local as much as official representations of ecological change are embedded in a political, economic and cultural context, and are neither shared nor uncontested.

ECOLOGICAL CHANGES AND EARLY CONSERVATION LEGISLATION

Settlers' rapacious and destructive use of resources was the main environmental issue for Southern Rhodesian officials in the first decades of the twentieth century. Deforestation on a previously unknown scale had accompanied the expansion of mining, because the mines depended on abundant timber for construction and fuel.⁵ Miners' legal rights ensured them access to wood and other resources free of charge on gold belt title land, and elsewhere they paid only minimal fees.⁶ Mine timber contractors commonly chose to cut in African areas, where they could easily avoid tariffs,⁷ and by the 1920s, Native Commissioners in mining districts were complaining of 'utter denudation of timber', though they were powerless to control it.⁸ Timber on European farms, in contrast, had a degree of protection through private title outside the gold belt and, later, by virtue of farmers' increasing political influence.⁹

Officials also criticised crude settler agriculture which was eroding and depleting the soil, destroying wetlands and river banks and silting up streams.¹⁰ Though for many settlers, farming 'meant only cutting down trees and selling wood, or cultivating a small patch of mealies',¹¹ others were cultivating to 'get rich quick' – at the cost of 'mining' the soil of its value.¹²

Agricultural, irrigation and forestry officials argued that this environmental destruction threatened future production and the future of the colonial project itself. Severe regional droughts in the 1920s and the dramatic loss of top soil on white farms in the rains of 1928 served to reinforce these views.¹³ Officials' anxieties, however, did not simply reflect the misuse of Southern Rhodesian resources, but were shaped by and themselves reinforced regional and Empire-wide alarm. Epitomising this attitude, the editor of the *Rhodesian Agricultural Journal* in 1928 raised the prospect not of national, but global deforestation within 37 years.¹⁴ The body of technical officers in Southern Rhodesia were part of an expanding scientific community who debated and published on the relationships between vegetation cover, soil erosion, rainfall and climate. Deforestation and soil erosion were blamed for declining rainfall, drought and desert encroachment.¹⁵ The ideas of the time were misleading in their understanding of the relations between forests, hydrology and climate and exaggerated in their conclusions, for example about the physical effects of deforestation *per se*.¹⁶ However, their alarm provided a basis for intervention.

From the late 1920s, a barrage of conservation legislation was put on the statute book: the Water Act of 1928 was followed in 1929 by the Native Reserves Forest Produce Act and the Game and Fish Preservation Act. If the timing and context of much of the legislation reflected the ideas of a regional scientific culture,¹⁷ Southern Rhodesian segregationist politics and the interests of different segments of Rhodesian settler society can explain its implementation. The conservationist goals of the various Acts implied a common interest in the

preservation of the colony's resources for future generations, yet the discourse surrounding enactment and implementation increasingly placed blame on African misuse of the environment and justified unequal restrictions.

The Native Reserves Forest Produce Act (NRFPA) was the first piece of conservation legislation which provided for state regulation of resource use specifically within the native reserves. It banned tree cutting for any purpose other than the 'direct fulfilment of subsistence needs', protected selected valuable species against felling for any purpose at all, and regulated timber concessions by means of an application procedure operating through Native Commissioners.

There was no doubt that the legislation threatened miners' access to timber in the native reserves. To secure its passage, the Act's supporters from the Departments of Agriculture and Native Affairs cast the regulations as intended to preserve trees for future mining use, attributing the blame for deforestation to Africans, particularly their use of fire and shifting cultivation. The Chief Native Commissioner Sir H.J. Taylor explained to Parliament:¹⁸

The Native Reserves Forest Produce Act aims at conserving and developing the woodlands of native reserves, a chief asset of the natives which needs protection from the natives themselves as much, perhaps, as from other exploitation.

The Water Act restricted cultivation within 30m of a water course on the grounds of erosion control. It was enforced in the native reserves in association with land use planning after 1929, when the designation of arable blocks on the dry watersheds restricted cultivation of wetlands except in the form of small dry season vegetable gardens (the effects of which are described below). This legislation was not enforced against settler agriculture.¹⁹

Conservation legislation was enacted as the depression was deepening, as the commitment to racial segregation was renewed and state 'development' of the increasingly crowded African reserves was bringing technical officials into contact with African producers in a new way. White farmers fiercely opposed further land allocation to Africans and, fearing competition, fought against these 'native development' programmes. In the face of opposition from settlers, officials in the Native Affairs Department emphasised how conservation interventions would obviate the need to allocate further land to Africans and justified their 'development' policies by emphasising their conservationist value.²⁰ New discriminatory maize and cattle marketing legislation in the 1930s secured markets and elevated prices for white farmers whilst it simultaneously undercut African production.²¹ The unequal application of conservation legislation also helped shore up European agricultural and mineral production.

Some headway was made with voluntary conservation schemes for the white agricultural sector. The country's first Irrigation Officer, responsible for soil erosion, was appointed in 1921 and as the result of his efforts, one tenth of settler agricultural land was contoured by 1936. After financial incentives for conser-

vation were introduced in the same year, this figure rose more quickly to a quarter of all land by 1938.²² In the native reserves, contouring programmes began only in 1936 and the alliances and coercion used in implementation are described below.

The success of incentive schemes for settlers, however, was not matched by the enforcement of restrictions on settlers' resource use.²³ The new legislative controls on cutting by miners and timber contractors were a case in point. Native Commissioners argued that there was a trade-off between conservation and development, and most prioritised the latter. Some were loathe to forgo the sizeable revenue from timber tariffs which funded 'development' in the reserves.²⁴ Others waived tariffs on the grounds that free timber reciprocated the 'development' miners brought to the country by providing jobs or by 'opening up' formerly remote areas; deforestation in these instances was portrayed as the cost, even the necessary cost of improvement. At other times, tariffs were waived as it was feared they would 'bear harshly' on the mine in question.²⁵ 'Conservation' in these instances took second place to miners' economic interests and the developmental project of colonialism, yet the existence of environmental regulations (even if unenforced) could be upheld as a step in the right direction.

In contrast to this leniency towards settlers, the Act was used to levy tariffs on Africans selling firewood, because their 'flagrant profiteering' constituted 'unfair competition' for European vendors.²⁶ Blanket restrictions on peasant farmers cutting live trees were also included under the Act, but these controls remained hortative as they criminalised every African household and the Native Department had neither capacity nor strong inclination for such a project.²⁷

After the mid 1920s, officials increasingly argued that Africans caused more severe damage to natural resources than settlers. For example, in a review of forestry in the country, the Chief Forest Officer explained:

It is common knowledge that the native method of cultivation, i.e. clearing and burning together with uncontrolled grazing for pasture causes more damage to forest growth than can ever occur through mere extraction by felling.²⁸

This shift in the representation of the causes of environmental problems in official discourse can be interpreted as expedient in segregationist Rhodesian politics: it allowed the passage of legislation threatening to miners' interests and justified inequitable enforcement of controls. But the increasing emphasis on African misuse of the environment also reflected regional trends and was part of a wider colonial scientific culture. Backward native populations' wasteful destruction of natural resources was a dominant theme of Empire-wide discourse in the 1930s: it became part of officials' training, was repeated in conference presentations, technical reports and scientific journals.²⁹ The fact that these views were 'scientific' and were propounded by scientists gave them weight and an appearance of objectivity.

Hegemonic colonial views on African misuse of the environment were not, however, uncontested: technical officers disagreed over which aspects of resource misuse were the most important and even over whether African agriculture was a conservation issue at all.³⁰ Although agriculturalists had called for controls on forest use, in general they were less concerned about deforestation than forestry officials. Emery Alvord, American missionary and later Agriculturalist for the Instruction of Natives, was principally interested in agricultural improvement rather than conservation *per se*. He found Rhodesian technical officers' conservationism exasperating and complained retrospectively of their 'tree conservation complex', elaborating that, 'It was the fixed obsession of official opinion that all trees must be preserved. No thought or consideration was given to proper land utilisation...'³¹ Significantly, Alvord's influence dominated policies of rural improvement in the reserves from 1920 to 1938.

The effect of conservation policy in this period was a failure to redress the major environmental problems, particularly those caused by miners, though changes to settler agriculture were significant after financial incentives were provided. Legislation was enacted, then enforced, in support of various settler interests. The prioritisation of 'development' over conservation when they were perceived to conflict further ensured that conservationist restrictions on settlers were ineffective. The 'vexed question' of mine timber was only resolved with comprehensive legislative controls enacted under the Forest Act of 1948, by which time the controls were partially redundant because miners' need for timber had in any case been drastically reduced by the National Electricity Grid.³² The next section turns to a case study of the District where conservation initiatives for the native reserves were piloted, to consider their impact and local interpretations.

STATE INTERVENTION AND ECOLOGICAL CHANGE IN SHURUGWI

In the reserves, officials feared environmental problems *per se*, and their consequences for productivity. Shurugwi was considered to be one of the worst cases, portrayed in the 1920s as teetering on the brink of ecological and economic disaster.³³ Alvord, for example, held that 'destructive tillage', 'misguided' agricultural practices and a 'traditional' way of life had ruined the land.³⁴ Ironically, Chief Native Commissioner Taylor made Alvord's appointment to the post of Chief Agriculturalist for the Instruction of Natives in 1926 partly in response to an article published in the Phelps-Stokes Education Report, which asserted that African methods of cultivation had been condemned too hastily in the past.³⁵

Although officials portrayed African agriculture as unchanging, the first three decades of the century had seen far-reaching transformations to agricultural practices which preceded state agricultural intervention. On the sandy soils of the middleveld of central and southern Zimbabwe, extensive, shifting dryland cultivation had become increasingly important where previously intensive wetland ridging had dominated, and metal ploughs caught on quickly after 1910. Far from being timeless customary practices, the growing emphasis on shifting and drylands were new developments, made possible when people could move out of their defensive hilltop settlements.³⁶ The changes were attractive as they improved returns for labour and gave younger men an unprecedented autonomy from their elders. In Shurugwi's characteristically fissive and decentralised Karanga chiefdoms, these changes undermined the control of chiefs, headmen and household heads over both people and land use. Although the new dry fields were more drought vulnerable, freshly cleared fields were relatively fertile, shifting reduced the impact of weeds, and the millets and sorghums grown in a good year could be stored for several seasons.³⁷ Maize could be sold on a large scale to the new markets of the settler economy in the 'decade of peasant prosperity' from 1915-1925 which preceded the Maize Control Acts of the 1930s.³⁸

Officials' descriptions of African agriculture and of environmental change can be misleading because they portray shifting cultivation as universal and 'traditional'; because they fail to consider practices in relation to the economic constraints of land, labour, capital and markets or to the ecological constraints of infertile soil, abundant weeds and patchy and variable rain; and because they present all cutting and burning of trees as a bad thing. Later documents ignore, downplay or misrepresent the effects of land alienation and land use policy.

Colonial land policy had a dramatic effect on the patterns of agricultural change underway in the native reserves. The implementation of segregationist land policies speeded up after the Native Reserves Commission of 1914-15 and involved 'squeezing' people into reserves, causing land scarcity and much hardship as Shurugwi's inherently infertile soils were quickly exhausted.³⁹ The population of Shurugwi reserve more than doubled over the five years from 1923-1928 and was to receive further evictees in subsequent decades.⁴⁰

However, environmental degradation was more than just a process of spatial marginalisation, whereby the poor were forced by land appropriation into small areas of poor quality land and were then compelled to extract their surplus by degrading their environment.⁴¹ Though ecological changes did stem from congestion and segregation, their particular form was shaped by state interventions in the reserves and the way these were manipulated at local level. The policy of centralisation implemented from 1929 onwards was particularly important in this respect.

Centralisation involved reorganising land use, separating blocks of arable and grazing land on either side of a central linear village located on the

watershed. The project was justified in different ways to different audiences and changed over time. Similar policies were already underway in the Southern Africa region, for diverse reasons. One tradition of settlement planning was that of strategic village consolidation for subjugation and administrative control.⁴² Another tradition was the planning and layout of 'model villages' by missionaries as part of their endeavour to civilise.⁴³ Centralisation was also to become a standard part of agricultural improvement packages in the region.

These different interests are evident in officials' justification of centralisation when it was introduced in Southern Rhodesia. The Chief Native Commissioner stressed its capacity for enabling more people to live in the reserves without further land allocation, which was particularly important in the face of settlers' opposition to native development.⁴⁴ From Alvord's point of view, as missionary as much as agriculturalist, the benefits were to be a new, improved way of life as well as enhanced production. People were to live close together in lines of 'proper' square brick houses, the main track was to be lined with jacarandas, leading to the primary school and village woodlots.⁴⁵ He saw centralisation's potential for undermining shifting cultivation, which had administrative benefits as well as enabling agricultural intensification.⁴⁶ When promoting the scheme in the reserves, however, Alvord emphasised how it would improve grazing land and reduce conflict over cattle damage to crops. It was not justified in conservationist terms at the outset: land was not contoured during these early centralisations, and it was only after a visit to the USA in 1935 that Alvord was convinced of the importance of soil conservation, and a Soil Conservation Officer was appointed in the Irrigation Department the following year to train native demonstrators.⁴⁷ There was no attempt to manage existing woodlands in the grazing block,⁴⁸ and controls on the use of indigenous timber for building homes in the newly centralised villages were not initially about preserving trees. In his own retrospective writing, Alvord recounts how he took advantage not of conservationist alarm but of the Government Medical Director's assertion that the pole and dagga hut was 'a breeding ground for sickness and death', to expedite the erection of improved brick houses.⁴⁹

In many historical accounts, however, centralisation is depicted as primarily a conservation policy. For example, Ranger describes centralisation as 'originally a conservation measure pure and simple', whilst Yudelman notes that 'the major emphasis of this land-use programme was on conservation and soil stabilisation'.⁵⁰ These views reflect justifications used to give the land use programme legitimacy at a later date, when settler opposition to 'development' programmes meant that development was justified increasingly in 'conservationist' terms, when Alvord himself was convinced of the value of conservation, and when the technical bureaucracies responsible for conservation became more influential. Phimister argues that the context of economic depression and the commitment to segregation were more important than conservationist concerns in dictating centralisation and conservation policies.⁵¹ However, he weighs

conservationist thought against its economic and segregationist context rather than looking at their interactions.

Local leaders in Shurugwi had their own reasons for adopting centralisation in 1929 and subsequent years. Alvord pioneered the scheme with the assistance of the newly placed agricultural demonstrator and in alliance with a small group of headmen led by headman Muhloro. Headman Muhloro was working for the colonial administration in Selukwe town at the time, which is where he met Alvord.⁵² Muhloro and a few other relatively wealthy Christian progressives who attended the Anglican mission of St Francis (established in 1912) were already plot holders in Alvord's agricultural demonstration programme which had been introduced several years earlier. Big men with sizeable cattle herds and the ability to command labour had been able to benefit from this programme to introduce improved seed and manure-fertilisation, which was particularly suited to relatively well-watered environments such as Shurugwi where yields were constrained by poor, sandy soils. They welcomed the demonstrator 'because he had knowledge' and were attracted to the idea of consolidating grazing land which Muhloro and Alvord discussed at length together, because it 'stopped you getting into trouble for herding your cattle in someone else's land'.⁵³

Headmen were used by the state to collect taxes after 1914 and had gained the title 'owner of the book' (*sabhuku*), so had an administrative interest in the new layout centralisation introduced. One kraalhead emphasised this point:

At first we refused to go into lines... But then some headmen [*sabhuku*] joined the demonstrators. The chiefs were adamantly against the idea. It was the *sabhuku* who was responsible for collecting taxes. It was going to make their job easier if we were in a line and orderly.⁵⁴

But headmen could also benefit in other ways. They were able to use centralisation to gain control over evictees and other immigrants who flooded into the reserve. They could also use it to try to reassert their authority over juniors and former dependants who had taken advantage of the new opportunities and independence provided by the settler economy. Moreover, headmen could secure privileged land rights for themselves in the face of increasing scarcity.⁵⁵ Unlike later centralisations, state agents did not allocate individual holdings within the arable block and some headmen themselves secured sizeable land holdings – several times larger than the supposedly reduced, egalitarian and intensively used plots.⁵⁶ As headmen often owned sizeable cattle herds, they and other big men also stood to gain disproportionately from any improvement to pasture, controls on residence or cultivation in grazing land. Phimister suggests that the alliances which facilitated state intervention were class based, however, such an interpretation cannot explain why the same class interests opposed the scheme in other contexts.⁵⁷

This alliance between some state-salaried headmen (*sabhuku*), a handful of wealthy Christian progressives and the Native Department undermined the

authority of the local chief Nhema, who tried to obstruct the scheme. Nhema's inflated status as 'paramount' over other chiefs had been brought about by the colonial state, but the authority his title conferred was contested by other chiefs in the district, and was nominal in many ways; headmen and other chiefs had a marked degree of autonomy. The influential headman Muhloro was head of one of the many houses of the Nhema chiefly lineage, and acted explicitly against the incumbent chief's wishes in adopting land use planning. Nhema's adamant resistance to centralisation was short lived and the following year he gave enthusiastic support, bringing about an alliance with Muhloro and the state which gave him economic and status benefits.⁵⁸ Alvord did not initially interpret the chief's interest as derived from enhanced authority and control over people, but attributed it to seeing the tangible benefits of fatter cattle.⁵⁹ However, in 1931, he noted that centralisation was considered:⁶⁰

most beneficial ... much satisfaction was expressed in the fact that headmen now know where each man on his book is living and where he has his lands and cattle with the result that all headmen and chief Nhema have better control over their subjects than before.

In official eyes, Nhema ceased to be the 'conservative reprobate steeped in superstition, witchcraft and taboos', and was thereafter 'intelligent' and 'ambitious for his people'.⁶¹

Whole communities were centralised after a headman's or chief's decision. Many said they heard of the scheme only as an order from the demonstrator, headman or chief: 'It was not a question of what we did or did not want, it was an order!'⁶². Coming as it did in the wake of the first phase of forced labour recruitment following land alienation, evictions and taxation, many felt their best tactic was to comply with the demonstrators' 'new laws'. 'As it was the headman who was told how many men were needed for forced labour [*chibaro*], and as he selected them, so you had to keep friendly with the headman', one old man explained.⁶³ The experience of prior state compulsion was emphasised in many of the oral accounts of this early phase of state intervention, although historical studies tend to downplay the use of force in the 'protective' phase of official development ideology in the 1920s and 1930s and stress its use only when compulsion became explicit policy in the 1940s.⁶⁴

This enthusiastic adoption of centralisation by some headmen in northern Shurugwi is not typical of other parts of Shurugwi, or of other parts of the country. Some chiefs and headmen in the district opted for a populist strategy of resistance. One chief resisted for six years and centralisation was only brought about in 1935 following his arrest and the appointment of a new chief.⁶⁵ From this part of the District, some saw chief Nhema as a 'yes man' and sellout: one old man joked that Nhema only wanted the village lines so that he could move up and down them drinking beer.⁶⁶ Another leader evicted into the area accepted centralisation as a necessary cost of obtaining land, whilst headmen remaining

on land alienated to Europeans similarly accepted it as a potential means of avoiding eviction or because they thought they had no choice.⁶⁷

The policy was not perceived as environmentalist in intent, and its adoption was not based on a consideration of its conservation value. Moreover, its impact was rarely perceived as conservationist – even by the scheme’s supporters.⁶⁸ Mr Mulausi, the first agricultural demonstrator in Shurugwi was responsible for implementing centralisation and was an ardent advocate of its value from a ‘development’ point of view, because it marked the acquisition of new knowledge and orderly villages, but nonetheless recounted how the ‘conservation phase’ came after the new village lines had been created.⁶⁹ As an administrative measure, centralisation could facilitate the introduction of other policies by the state, including conservation policies, but, in itself, had no direct conservation value. As centralisation was implemented around the country, the state increasingly used conservation arguments in its justification: these suited the segregationist land policy, had administrative appeal, created a sense of urgency and later added weight to justifications for the use of force.

CONSERVATION AND THE SHIFT TO COMPULSION IN STATE INTERVENTION

Before turning to consider the environmental impact of centralisation and conservation policy as it was interpreted in Shurugwi, this section briefly discusses the shift to compulsion in official ideology in the period running up to and following the Second World War. This is important, as much conservation legislation put on the statute book in the earlier period was only enforced effectively in this later period. The framework for the new authoritarian and increasingly technocratic approach was laid out in the Natural Resources Act of 1941 and promoted by the Natural Resources Board (NRB) which was established in 1942. Changes in Southern Rhodesian official ideology were mirrored in the enhanced power of technical departments throughout the Southern African region, as command planning became increasingly in vogue.⁷⁰

Conservationist arguments provided the cutting edge to justifications for the use of compulsion. Alarm about overstocking and overgrazing replaced earlier concerns, and in 1943 compulsory destocking regulations were passed. As contouring programmes were encountering resistance, the NRB also gained legal powers for the compulsory engagement of African labour in soil conservation works. They could dismiss objections which pointed out that this contravened ILO policy on forced labour by defining ecological problems in the reserves as a national emergency, and drawing on the ILO’s own list of extenuating circumstances, which comprised:

Any work or service in cases of emergency that is to say, the event of war or of a calamity or threatened calamity such as fire, flood, famine, earthquake, violence,

epidemic or epizootic disease, invasion by animal, insect or vegetable pests, and in general by circumstances that would endanger the existence or well-being of the whole or part of the population.⁷¹

To address this national emergency, staff were recruited on a large scale. In 1947, 44 Land Development Officers were employed to supervise native agriculture and soil erosion, whilst the new department of Conservation and Extension recruited graduates from the conservation course for ex-servicemen at Witwatersrand University.⁷² A full scale propaganda war was launched in the interest of saving the country's resources: 35,000 copies of a free 'native newspaper' were distributed 'pointing out the folly of bad farming practices and explaining how good husbandry would help them to improve their standard of living'.⁷³ Compulsion for those in the reserves was matched by large-scale grants, loans, the provision of tractors and other incentives to assist white settlers in implementing conservation measures. Settlers using conservationist farming practices were accorded raised maize prices.⁷⁴ Under the Natural Resources Act, Intensive Conservation Areas (ICAs) could be proclaimed once the majority of settler farmers in a given area agreed to farm progressively and this entitled them to enhanced subsidy so soon covered most white farming land.⁷⁵ The broader context in Southern Rhodesia was one of a new round of evictions, of drought in the early 1940s and further lowering of maize prices for African producers.⁷⁶ The scarcities experienced in the metropole and in Southern Rhodesia during the war renewed and heightened a sense of urgency to conserve and develop natural resources in the colonies and at home.⁷⁷

INTERPRETATIONS OF THE ECOLOGICAL IMPACT OF CENTRALISATION AND CONSERVATION

The effect of land use planning and conservation restrictions was to shift agricultural production away from the wetlands to a focus on dry land. People were forced to abandon their intensively managed wetland fields because the newly designated arable blocks were located on the drier, sandy and inherently infertile soils of the watersheds. Restrictions on wetland cultivation meant that farmers' use of wetlands was limited to small-scale dry season vegetable gardens allocated by the demonstrator, as wetland came to be part of the grazing block.⁷⁸ The effect of these interventions was to restrict access not only to the wettest land, but also to the most fertile soils, which could otherwise contribute to food security in times of drought and more generally were an important source of diversity in agricultural production. As new village lines were on the watershed, and were often further from water sources than before, women complained that water collection had become more arduous.

The new lay out caused new problems of soil erosion, concentrating the movement of people and cattle along paths and creating new gulleys.⁷⁹ Early

crude efforts at contouring after 1936 exacerbated soil loss by concentrating runoff behind ridges, the breach of which at weak points often caused 'more severe loss of soil than would have occurred if conservation had not been attempted', according to a technical study undertaken in the mid 1950s.⁸⁰ Land use planning also reduced woodland cover: as forest was cleared to make way for new fields, a combination of factors prevented its regeneration on old fields outside the new arable blocks.⁸¹ Firstly, much of the area formerly cultivated was seasonally or permanently waterlogged and, though ideal for cropping, was not suited to forest growth. Secondly, on dryland fields, regeneration depended on how thoroughly fields were cleared – where agricultural demonstrators had successfully promoted destumping, regeneration of the dominant tree species was delayed.⁸² Finally, the construction of homes in the new linear villages involved large volumes of wood. Even where NRFPA controls on cutting timber were implemented, wood-fired bricks consumed increasing quantities of wood. Some old people in Shurugwi argued that deforestation resulting from centralisation was critical to processes of adverse environmental change because trees hosted land spirits, attracted rain, enabled clouds to build up, kept the land cool and preserved moisture in the environment. Specific individual trees as well as certain tree species and defined areas of 'sacred woodland' were particularly significant in this respect. The removal of sacred woodlands was of most import to those leaders who had defined them as sacred.

These adverse effects were minimised as far as possible at local level. For example, farmers tried to retain trees in fields⁸³ and made use of ponding and waterlogging behind contours by planting rice. New techniques for maintaining soil fertility (involving applying soil from termite hills and leaf litter) were developed in the face of land scarcity, as shifting was no longer possible, while state-promoted intensification programmes were suited only to those with cattle, and only to the more sandy soiled, well-watered reserves where soil fertility was the main constraint on production.⁸⁴ In some places, people resisted the policies' implementation by extending their fields back into wetlands and distorting the village lines by moving their homes: the extent to which this was done was highly variable in both space and time and dependent on local politics.

Though centralisation brought about many negative environmental changes, it did not herald environmental collapse. Land became scarce and was increasingly unproductive if used permanently without labour intensive fertility inputs; however, the other resource scarcities perceived by officials were not experienced by many living in the reserve at this time. The clearance of trees had religious and ecological implications, but did not create economic scarcities: wood was still available from rocky parts of the landscape (kopjes and incised river valleys) whereas parts of the landscape which did not have a high physical stock of trees were nevertheless highly productive of woody biomass. There were even complaints about too many trees in some places. People could

generally still find the timber, fuel species and other forest produce they wanted, as long as they had the time and labour to collect it.⁸⁵ Grazing land supported herds of increasing size and some small game was still available in the reserve.⁸⁶ Old people commonly recalled that they were scared of tracts of unoccupied forest, which were reputed to harbour thieves, feared spirits and wild animals. They were not, therefore, unanimously grieved in seeing the reduction of the woodlands.⁸⁷ Not all deforestation was a bad thing to everyone.

Interpretations of ecological change occurring in centralisation's wake often emphasised the violation of the spiritual order and physical destruction or profanation of specific sacred sites which occurred in the process of state intervention. Some described the village lines themselves as an offence to the rain god at Matopos, and to ancestral and land guardian spirits. Some described how the deforestation which accompanied state intervention caused sacred springs and forests to dry out and sacred river pools to silt up, so transforming and making 'salty', dry and dirty the moist, cool habitats preferred by spirits, and leading to their departure. Some sacred woodlands were cut down as the landscape was reorganised, whilst lion spirits [*mhondoro*] in those which remained were said to have begun to depart after this period.⁸⁸ The breach of 'traditional' ecological controls was disrespectful of the ancestors and the order they upheld through elders.

These explanations were not universal. Some people used deforestation as a metaphor for development rather than profanation and portrayed life in the bush as the epitome of backwardness.⁸⁹ The departure of the old order – symbolised by deforestation and the new watershed village lines – was neither regretted nor regarded as a problem by everyone. One master farmer recounted how 'centralisation was a good thing: it was good to control grazing, farm properly and have smart villages. People objected at first because they didn't understand these things'.⁹⁰ Others spoke favourably of applying the demonstrators' knowledge, referring to past ways disparagingly or merely emphasising how times had changed. Many explained how they got used to the lines over time.

Dispute over the interpretation of environmental change was important in local politics because of the relationship between maintaining the fertility of the land and legitimate 'traditional' authority. Prior to state intervention, local authority was legitimated by establishing one's ancestors as indigenous or as having been given land by the autochthonous and previously land-holding Rozvi.⁹¹ Such a history gave privileged access to land spirits (ancestral spirits and/or lion spirits known as *mhondoro* which in Shurugwi were usually Rozvi spirits).⁹² Edicts from *mwari*, the raingod of the Matopos, reinforced the importance of respecting local spirits. The moral code of environmental practice and ritual, which local leaders and spirit mediums upheld, not only invoked communal environmental benefits such as rainfall and fertility but also defined a relationship of control over both territorial resources and people.⁹³

Such local authority was profoundly challenged by the opportunities which accompanied the political and economic changes of the early colonial period. Large-scale immigration of evictees with their own leaders posed further challenges to local authority, as did heightened competition over resources. In response, some local chiefs, headmen and cult messengers began to exhort traditional ecological controls with renewed vigour, underlining their own legitimacy as autochthons, elaborating in greater detail the fate of those punished by land spirits, and beginning to threaten, introduce or step up fines or other punishment for breach of the rules.

Existing local leaders required incoming evictees and other immigrants to recognise their authority. Newcomers' were supposed to respect the chiefly and autochthonous land spirits, and to obey the moral code of environmental practice. However, immigrants could use the fact that they were outsiders to claim that they did not know the ecological regulations, or that the rules were not for them: they cut in sacred woodlands and used forbidden species.⁹⁴ Those who came in sizeable groups with their own leaders sometimes set up their own rain-shrines, organised their own ceremonies and made contact with the messengers of the *mwari* cult.⁹⁵ Breakaway factions of local families could also establish themselves independently. Some Christian churches set themselves up in opposition to 'traditional' religion and provided further reasons for non-compliance with the existing order.⁹⁶ In this context, the state could provide a more effective and less easily contested authority over people and resources than 'traditional' land guardianship. As described above, some headmen chose to invite and effectively manipulate centralisation in their own political and economic interests.

Of course, struggles over state authority did not eliminate contestation over 'traditional' land guardianship which remained a focus for local conflicts. Whilst both sources of authority sometimes bolstered the same individual, they were often polarised in local disputes – for example between competing houses of a chiefly lineage or between dominant and immigrant groups. In interventions after 1941, when policy had become more technocratic, it was more difficult for leaders to manipulate and use interventions to their own ends. One such dispute occurred over the establishment of a *Eucalyptus* woodlot on the site of a sacred woodland after a line pegged initially in 1929 was repegged in 1951. The locally resident Native Forestry Officer and agricultural demonstrator who organised the intervention under instruction from the white Land Development Officer were not members of the local chiefly lineage – they argued that the sacred woodland had never been sacred:

it was merely a place where trees were in a thicket [*miti kupfekana*]. It can't have been sacred, if it had been, then the spirit would have protected it.⁹⁷

Members of one house of the chiefly lineage opposed the intervention arguing that the sacred site had been deliberately chosen for profanation.⁹⁸

The government planted gum trees on the sacred woodland [*rambokutemwa*] at Jariden. They knew it was sacred. They did it to show they were powerful. The lion spirit [*mhondoro*] which used to protect it left, and the rainfall became less – now we only have the rain ceremony [*mutoro*] to rely on.

In fact the woodlot site had been chosen in accordance with the standard forestry criteria, as policy dictated that woodlots for timber and fuel should be planted on suitable sites which would be indicated by tall and dense stands of indigenous trees.⁹⁹ Those implementing this policy did not necessarily recognise its technical ‘conservation’ value. The local state soil conservation ranger who helped remove the trees held that colonial woodlot policy was a mere expression of state power on pragmatic rather than religious grounds, because at the time there were already enough trees:

Previously people were not interested in gums, there were plenty of trees. We were just being troubled. Like at Jariden it was a real thicket, and we suffered stumping them all out.¹⁰⁰

Some resented the fact that the mature trees had to be bought and were not distributed to those who had planted them. Others thought that this was yet another ploy for land alienation.¹⁰¹ Women complained that they had been forced to do all the work without payment.

Local narratives of ecological change and accounts of the success or failure of interventions are coloured by local politics and the particular configuration of alliances with the state. As retrospective accounts, they are also influenced by current attitudes. But evidence from official accounts also has to be handled with extreme care: just as centralisation’s supporters saw the value of the lines in terms of ‘staying tidily [*kugara kuchena*]’, officials who argued that centralisation was ‘successful’ in Shurugwi often used aesthetic criteria as evidence, such as the orderliness of the lines of houses, and saw the new organised landscape as itself symbolising development. Others pointed to the administrative benefits rather than positive environmental change as justification. The argument that rural afforestation was a success could be based on the fact that trees were planted – even if they were not used because there was no demand for them at the time. More generally, the reports themselves are often contradictory. Technical officers had an interest in identifying problems which their professional training and state intervention would solve: reports often exaggerate problems caused by ‘traditional’ practices to reinforce the need for a more far reaching state natural resources strategy. The visit of an investigatory Natural Resources Board team to Shurugwi in 1942 was 13 years after the first villages were centralised and 8 years after the majority had been laid out. The Shurugwi diary noted:

This reserve was the first to be centralised and it is claimed that thereby the conditions in it have been greatly improved – indeed it has often been cited as an example of what centralisation can do. Quite apart from the merits of centralisation the fact remains

that the whole area is in desert conditions... To save this reserve, it seemed to the board that nothing short of withdrawing it from occupation for a sufficiently lengthy period to give it time to regenerate would suffice.¹⁰²

These accounts contradict other reports lauding the achievements of centralisation in conservationist terms.¹⁰³ The exacerbation of some environmental problems subsequent to the implementation of 'conservation' and land policies did lead to some questioning of policies and the knowledge on which they were based. However, the outcome of such questioning in this period was to heighten prejudice against African agriculture and to reinforce the need for technocratic solutions. The conservationist and increasingly technical debate allowed African demands for land to be circumvented and provided a justification for the need to educate and change practices by force. This trend culminated in the 1950s with the apogee of technocratic policies – the Native Land Husbandry Act.

CONCLUSION

Official readings of the landscape were made in a political context of segregation and racial dominance. They drew on scientific understandings promoted by their technical training and a hegemonic colonial ideology of disrespect for African production. Within this context, however, representations of ecological change were nonetheless much contested.

'Conservation' arguments were used in a variety of ways in Southern Rhodesian politics. Officials came to use the interest of 'conservation' to justify centralisation after it had already been introduced for other reasons: it added legitimacy to 'development' policies at a time when they were not otherwise politically acceptable to settlers. At the same time, however, conservation policies were dropped when they were perceived to conflict with settlers' interests which were defined as 'developmental' – for example, continuing to allow miners' access to trees in the reserves on the grounds that they were bringing development to the colony. Conservationist arguments later provided the cutting edge to arguments for the use of force to implement state intervention, whilst a conservationist interest in transforming land use within the reserves conveniently diverted attention from African demands for more land.

Conservation interventions in the native reserves were drawn into local level struggles over political authority and themselves provoked new struggles. Local leaders control over land, resources and people had been derived from privileged access to land spirits. Their authority was inherently contestable, and became subject to particular challenges in the early colonial period. Early state interventions were manipulated by some local leaders to their own economic and political ends rather than for the mutual benefits of conservation.

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Officials' repeated assertions of an environmental crisis were partly legitimations for successive state interventions; they also described the product of state land and conservation interventions. Despite being interpreted by officials as laying the basis for conservation within the reserves, land use policy led to new ecological problems. Woodland was cleared as fields were shifted up the watershed to newly cleared dryland blocks which were later crudely contoured whilst wetland fields were abandoned. However, this did not necessarily amount to a crisis of the same type as officials portrayed. At the same time as natural resources experts wanted to evict Shurugwi's population to allow the 'desert' to recover from misuse, local people tell a different story. Although land and particularly wetlands had become scarce, and land alienation and eviction had caused bitter resentment and much hardship, the reserve was not on the verge of ecological collapse and many environmental resources were not scarce in economic terms.

Local representations of environmental change are no less political and no more universal than official accounts. For old people in Shurugwi, the process of deforestation and moving into village lines epitomised the departure of the old order and the entry of the new. Whilst for some this had brought with it environmental decline and deep offence to ancestors and spirits, for others, notwithstanding the exhausted soils produced by land scarcity, it marked the acquisition of new knowledge, a modern way of life and the abandon of former backward ways.

NOTES

¹ This paper is based on research funded by the ESRC (UK) as part of my PhD, 'Ecology, Policy and Ideology: An Historical Study of Woodland Use and Change in Zimbabwe's Communal Areas' (Loughborough University of Technology, 1991). The interviews referred to in this article are some of the many carried out whilst I lived in Shurugwi from September 1987 – January 1989. I would like to thank the many people who gave interviews; my translators and research assistants Marion Gandire, Godwin Komboora, Justin Masaga and Priscilla Munyenyiwa; my supervisor Morag Bell; and those who gave helpful comments on drafts of this paper including J. Alexander, W. Dopcke, D. Jeater, M. Leopold, and K. Wilson.

² The colonial name for Shurugwi was Selukwe.

³ Described in: T. Ranger, 1985, *Peasant Consciousness and Guerrilla War in Zimbabwe* (London: James Currey); N. Kriger, 1992, *Zimbabwe's Guerrilla War: Peasant Perspectives* (Cambridge: Cambridge University Press); M. Drinkwater, 1992, *The State and Agrarian Change in Zimbabwe's Communal Areas: An Application of Critical Theory*, (London: Macmillan); J. Alexander, 'The State, Agrarian Policy and Rural Politics in Zimbabwe: Case Studies of Insiza and Chimanimani Districts, 1940-1990' (PhD, Univ. of Oxford, 1993).

⁴ On spirit land guardianship in Zimbabwe, see: J.M. Schoffeleers (ed.), 1979, *Guardians of the Land*, (Zimbabwe: Mambo Press), pp. 235-297; B.Mukamuri, this volume; K. Wilson, 1989, 'Desecration and Degradation' (ms).

⁵ Official concern over deforestation is raised regularly in the reports of the Dept. of Agriculture: see statements of Director J. Townsend, 1905, 1906; Report of Chief Agriculturalist, 1928; Captain Mowbray, Southern Rhodesia Arboricultural Association, letter to the *Gwelo Times*, 4/5/1928; Ministry of Mines, Annual Report, 1928; evidence in Native Affairs reports in footnote 8; I. Phimister, *An Economic and Social History of Zimbabwe, 1890-1948* (Longman, 1988), pp. 61-62.

⁶ Annual Report, Chief Commissioner of Forests, 1949, ZNA S/RH 2217.

⁷ Letter, CNC to Supt. Natives, Bulawayo, 18.1.20. ZNA S138/61.

⁸ See documents in ZNA S138/61: 'Report on Woodcutting' NC Shabani District; Letter NC Inyati to Supt. Natives, Bulawayo 24.6.31; correspondence relating to depletion by mines in Wedza, Mtoko, Mrewa, Nyamandlovu, Chiweshe, Gwaii, Semokwe, Insiza, Belingwe. Cf. ZNA S1542 W8. Oral testimony also details severe deforestation: interviews, Shurugwi, 1987-9; K. Wilson, 1987 'Report on Trees in the Mazvihwa and Surrounding Areas', (ENDA-Zimbabwe: ms), pp. 1-2.

⁹ Phimister, 1988, p.96.

¹⁰ See for example, W. Martin Watt, 'The Dangers and Prevention of Soil Erosion' *Rhodesia Agricultural Journal*, X (1913).

¹¹ Hole, H.M. 1928, *Old Rhodesian Days* (London), p.74, cited in Phimister, 1988, p.58. See also, letter from NC to CNC Salisbury 27/4/33. ZNA S138/61.

¹² Phimister, 1988, p. 130, citing *Report of the Director of Agriculture for the Year 1920*, p5 and *Report of the Secretary, Department of Agriculture, for the Year 1927*, p.41. Tobacco curing later augmented the demand for woodfuel.

¹³ See Dept of Agriculture, Annual Report, 1928.

¹⁴ Editorial, *Rhodesian Agricultural Journal* 1928; American and South African influence dominated policy relating to soil erosion, Beinart, 1984. Amongst forestry officials, the Indian and South African experience was key, McGregor, 1991, chapter one.

¹⁵ On environmental and desiccation ideas, see Beinart, 1984, pp.55-62, and R. Grove, 1989, 'Scottish Missionaries, Evangelical Discourse and the Origins of Conservation Thinking in Southern Africa 1820-1900', *Journal of Southern African Studies* 15(2), pp.163-187.

¹⁶ See McGregor, 1991, pp.28-30, for a review of changing ideas on the relationship between deforestation, hydrology and climate in the light of the current scientific literature. Contemporary reviews include C.E.P Brooks, 1927, 'The Influence of Forests on Rainfall', *Empire Forestry Journal* 6, pp.210-218; R. Zon 1927, 'Forests and Water in the Light of Scientific investigation', US National Waterways Commission, Final Report'; J.F. Hughes, 1949, 'Forests and Water Supplies in East Africa' *Empire Forestry Review* 28, pp.314-323; R.S. Troup, 1940, *Colonial Forest Administration* (Oxford: Oxford University Press), appendix 'Forests and Water'.

¹⁷ As argued by Beinart, 1984. See also R. Grove 'Early Themes in African Conservation' in D. Anderson and R. Grove (eds) *Conservation in Africa: Peoples, Policies and Practices* (Cambridge University Press, 1987), p.28.

¹⁸ Southern Rhodesia Legislative Debates, 1929. For further detail, see McGregor, 1991, chapter 2.

¹⁹ Relevant sections of the Water Act and its 1938 Amendment were not enforced, Phimister 'Discourse and the Discipline of Historical Context' *Journal of Southern*

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African Studies, 12/2, pp. 265, citing *Report of the Commission to Enquire into the Preservation etc. of the Natural Resources of the Colony*, 1939, pp. 16-18, 23, 35.

²⁰ I. Phimister, 1984, pp.183-207; I. Phimister, 1986, p.270; R. Palmer, 1977, p.202; Alexander, 1993, p.9.

²¹ On marketing, see: B. Davis and W. Dopcke, 1987, 'Survival and Accumulation in Gutu: Class Formation and the Rise of the State in Colonial Zimbabwe, 1900-1939' *Journal of Southern African Studies* 14(1), pp.64-85; I. Phimister, 1986 'Discourse and the Discipline of Historical Context: Conservationism and Ideas About Development in Southern Rhodesia 1930-1950' *Journal of Southern African Studies* 12(2), pp.263-275; I. Phimister, 1988, *An Economic and Social History of Zimbabwe 1890-1948: Capital Accumulation and Class Struggle* (London: Longmans); T. Ranger, 1985; R. Palmer and N. Parsons, 1977, *The Roots of Rural Poverty in Central and Southern Africa* (London: Heineman); R. Palmer, 1977, *Land and Racial Domination in Rhodesia* (London: Heineman).

²² Annual Report, Department of Agriculture, 1936, p.3. Phimister, 1986, p.265, uses this as evidence of a lack of commitment to conservation on the part of the state.

²³ E.g. under the Water Act and Forest and Herbage Act. Phimister, 1986, p. 265; *Report of the Commission of Enquiry into the Preservation, etc., of the Natural Resources of the Colony*, 1939, pp.16-18, 93, 35; *Rhodesian Agricultural Journal* 1941 (38), p. 539.

²⁴ This amounted to 39% of the Native Reserves Trust Fund in 1939, Department of Native Affairs, Annual Report, 1939.

²⁵ Letter NC Bazeley to CNC, ZNA S 235/358. Cf. correspondence in ZNA S 138/61: e.g. letter NC Maranke to CNC 19.4.28; reply CNC to NC 19.9.29; letter NC Shabani to CNC and reply.

²⁶ See correspondence in S138/61, for example ANC to NC Shamva 26.8.29; also letter from Mr Allison of Rhodesia Publishers to CNC 30.7.45 and other correspondence in ZNA S 178/76.

²⁷ Detailed in McGregor, 1991, pp.45-48.

²⁸ Kelly-Edwards, letter to Forest Officer, Salisbury 6/6/28. ZNA S 138/3. See also, *Forestry in Rhodesia*, 1934, ZNA RG/FOR 53, pp.22-23.

²⁹ See: Beinart, 1984, p.63; McGregor, 1991, pp. 37-41. Such views were in line with foresters' training, see R.S. Troup, *Colonial Forest Administration* (Oxford University Press, 1940).

³⁰ E.g. A. C. Jennings, 1927, *Rhodesia Agricultural Journal* XXIV pp.328-30 argued that settler agriculture caused soil erosion because of clean cultivation, deep ploughing up and down slope; whereas African agriculture did not because stumps were retained, fields were weedy, cultivating was shallow and fallows regular.

³¹ E.D. Alvord, n.d., 'Development of Native Agriculture and Land Tenure in Southern Rhodesia' (Rhodes House, Oxford: ms), p36.

³² Annual Report, Chief Conservateur of Forests, 1949; Annual Report, Ministry of Mines, 1950.

³³ *The Report of the Land Commission, 1925* (Govt of S. Rhodesia: 1926), singled out Selukwe, Bushu, Mzingwane, Que Que and Lower Gwelo as the worst; Palmer, 1977, p.124 notes that Selukwe was one of the most congested reserves. See also NC Shurugwi, Annual Report 1929, 1930; Files ZNA S 138/61.

³⁴ Alvord, n.d., p.2-3.

³⁵ R. Palmer, 1977, p.202 referring to H.L. Shantz, 1924, 'Agriculture in East Africa' in T.J. Jones (ed), *Education in East Africa* (New York), pp.353-402.

³⁶ See also K. Wilson, 'Human Welfare and Ecological Dynamics: A Case Study of Population, Health and Nutrition in Southern Zimbabwe' (PhD, Univ of London, 1990), appendix 2.

³⁷ For further detail on changing agricultural practices, see McGregor 1991, pp. 71-81; K. Wilson, 1990, pp. 630-642; Floyd, B.N., 1959, 'Changing Patterns of African Land Use in Southern Rhodesia' (University of Syracuse, USA: PhD thesis).

³⁸ Palmer, 1977, chapters 5 and 8. Some oral testimonies from Shurugwi criticise some early use of the plough in cultivating up and down slopes and ploughing up wetlands. Though some individuals probably enhanced erosion in this way, it is difficult to estimate on what scale, as today's historical accounts can be influenced by a more general disparaging of non-modern methods. Most could not command the necessary labour and livestock to plough on a large scale, and destumping was not common prior to state intervention, so any erosion may still have been on a reduced scale than that on settler farms.

³⁹ On land alienation, see M. Drinkwater, 1988, 'The State and Agrarian Change in Zimbabwe's Communal Areas: An Application of Critical Theory' (University of East Anglia: unpublished PhD Thesis) p.293; R. Palmer, 'The Agricultural History of Rhodesia' in Palmer, R. and Parsons, 1977; Palmer, 1977, chapters 4 to 6.

⁴⁰ The population of Selukwe grew from 5,400 to 11,400 between 1923 and 1928, NC Selukwe, Annual Reports 1923-1928 ZNA S235/500.

⁴¹ Theories of spatial marginalisation have been described and discussed in P. Blaikie, and H. Brookfield, 1987, *Land Degradation and Society*, (London: Methuen); and in M. Redclift, 1984, *Development and the Environmental Crisis – Red or Green Alternatives*, (London: Methuen).

⁴² As used, for example, after the Chilembwe uprising, McCracken, 1987, pp.68-69; L. White, 1984, 'Tribes and the Aftermath of the Chilembwe Rising' *African Affairs* 83(333) pp.511-541.

⁴³ Described in *Report of the Commission on Native Education, Southern Rhodesia*, 1925.

⁴⁴ CNC Annual Report, 1932, cited in Drinkwater, p293. See also: NC Selukwe Annual Report 1929, 'It was with a view to alleviate the position overcrowding that a scheme for the concentration of the innumerable small kraals to form fewer larger ones and to centralise arable and grazing was introduced'; cf. letter, NC Selukwe to Supt Natives in Bulawayo 17.7.30. Phimister, 1986, pp.263, 274-5 argues that centralisation was basically segregationist in its purpose.

⁴⁵ Alvord, n.d., p.25, p47.

⁴⁶ Retrospectively, he noted its importance was 'to facilitate administrative problems, make more easily possible improved agriculture, security of tenure, the stability of home life, the consequent adoption of more progressive attitudes and of higher standards of educational ability.' Alvord n.d. p.19.

⁴⁷ Chief Native Commissioner, Annual Report, 1936.

⁴⁸ In later centralisations in other parts of the country, after the secondment of a forester to the Department of Native Affairs in 1938, an attempt was sometimes made to define forest reserves within the communal lands at the stage of drawing up the plans. See Letter FO to CNC 4.4.38 'Afforestation and Conservation of Timber in Native Reserves'; and 'Utilisation of the NRT' NAZ S1542 F9. In Shurugwi at the time of the lines, no forests were demarcated, although there is one reference to forest areas having been designated in 1935 (Report 27 3.4.35, 'Inspection of plantations and sites in Selukwe reserve' NAZ S 1542 F9). No one in the communal land knew of their existence.

- ⁴⁹ Alvord, n.d., p.32.
- ⁵⁰ Ranger, 1985, p68; M. Yudelman, 1964, *Africans on the Land*, (Oxford: Oxford University Press), p116.
- ⁵¹ Phimister, 1986, p274-5.
- ⁵² Interview, Rusere I. Muhloro Makonese, Shurugwi, 20.3.92; interview, Jadjji Makovere, 20.3.92.
- ⁵³ Interview, R.I. Muhloro Makonese. See Alvord to CNC 18.1.29 and Minute No. N.49/28, p. 3. For detail on the demonstration programmed in Shurugwi, see McGregor, 1991, chap. 3.
- ⁵⁴ Interview, Mr Bunhu, Shurugwi, 3.10.93.
- ⁵⁵ Aside from evictees, foreign labourers (particularly from Malawi) working in the Shurugwi mines commonly married locally and wanted land for their families, interviews, Shurugwi, 1987-89; NC Selukwe, Annual Report, 1945.
- ⁵⁶ Interviews, Shurugwi, 1987-89. See also, letter from ANC to NC Selukwe, 25.1.31; letter NC to Supt Natives, Bulawayo, 3.2.31, ZNA S1007/7. Other headmen were unsatisfied with the areas allocated to them: headman Mdzezo for example, claimed that his land had been allocated to Muhloro, letter ANC to NC Selukwe 25.1.31. Individually surveyed plots were introduced only after 1943.
- ⁵⁷ Phimister, 1988, p.143.
- ⁵⁸ After this, both Nhema and Muhloro received training from Alvord at Domboshava. Interview, Rusere I. Muhloro Makonese, Shurugwi, 20.3.92.
- ⁵⁹ This interpretation is also given by Palmer, 1977, pp.220-221, and R. Gray, 1960, *The Two Nations: Aspects of the Development of Race Relations in the Rhodesias and Nyasaland* (Oxford University Press), p.61.
- ⁶⁰ Agriculturalists' minutes No. D9 31/1539 23.4.31. ZNA S1007/7 1930-33.
- ⁶¹ Alvord, n.d.; see also, Supt. Natives, Bulawayo, to CNC Salisbury, 3/2/31, ZNA S 100 7/7 1930-33.
- ⁶² Interview, Mr Mukorombindo, Shurugwi, 21.10.87.
- ⁶³ Mr Matangamberi, 15.10.87.
- ⁶⁴ The periodisation usually used is that of S.E. Morris, CNC Annual Report, 1961, pp.19-30. See also M. Drinkwater, 1988, 'The State and Agrarian Change in Zimbabwe's Communal Areas: An Application of Critical Theory' (University of East Anglia: PhD Thesis), p.59.
- ⁶⁵ See McGregor, 1991, chap 3 for further details.
- ⁶⁶ Interview, Mr Bunhu, 3/10/88, Mr Mapendere, 21.10.87.
- ⁶⁷ Interview Mr Mukorombindo, 7.10.87.
- ⁶⁸ Most local progressives and advocates of the value of separating arable and grazing land, did not regard putting homes into lines as conservationist.
- ⁶⁹ Interview with Mr Mulausi, Shurugwi, 11.11.87.
- ⁷⁰ Beinart, 1984, p75-6. For detail on technical development in this period, see: Alexander, 1993, chapter 2; J.F. Holleman, 1969, *Chief, Council and Commissioner* (Oxford University Press); Drinkwater, 1989.
- ⁷¹ Quoted in Natural Resources Board, Annual Report, 1946, p.6.
- ⁷² Natural Resources Board, Annual Report, 1947, pp. 1-6, and 1948, p.4.
- ⁷³ Circulation figures from NRB 1948, quote from NRB 1947, p. 8.
- ⁷⁴ Cited in Phimister, 1986, p.266.
- ⁷⁵ Phimister, 1986, p. 267, citing H. Weinmann, *Agricultural Research and Development in Southern Rhodesia* (Salisbury, 1975), pp. 145-6. See also NRB, Annual Report, 1947,

p.9 and 10. ICAs were introduced for the Native Purchase Areas in 1954.

⁷⁶ See Phimister, 1988, pp.219-282.

⁷⁷ Government of Southern Rhodesia, 1947, *Empire Forests and the War. Statement for Southern Rhodesia* (Salisbury: Government Printer).

⁷⁸ The policy of allocating small gardens in the face of broader restrictions is described in D. Aylen, 1942, 'Conserving Soil in the Native Reserves' *Rhodesia Agricultural Journal* 39, pp.152-60; M. Bell and P. Hotchkiss, 1989, 'Political Interventions in Environmental Resource Use With Reference to Dambos in Zimbabwe', *Land Use Policy*, Sep, 1989; K. Wilson, 1986; IIED, 1991 *Wetlands in Drylands: The Agroecology of Savanna Systems in Africa* (London: International Institute for Environment and Development).

⁷⁹ See Wilson, this volume; Floyd, 1959, pp. 125, 326; J. Elliott, 1989 'Soil Erosion and Conservation in Zimbabwe: Political Economy and the Environment' (PhD, Loughborough). Experiments by D.B. Versveld, 1981 'Overland Flow on Small Plots at the Jonkershoek Forestry Research Station' *S.African Forestry Journal* 119, pp. 35-40 show how on sandy, permeable soils, overland flow can be negligible except for the 'source areas' of roads and compacted areas.

⁸⁰ Floyd, 1959, p 326. K. Wilson, this volume.

⁸¹ In some places, land use was redesignated more than once, entailing further land clearance. Community workshop, Ward Two, Shurugwi, 21.3.89.

⁸² The former dominants *Brachystegia spiciformis* and *Julbernardia globiflora* show vigorous regrowth after coppicing, but are slow to invade and establish on fields under quite heavy grazing, J. McGregor, 1994, 'Woodland Pattern and Structure in a Peasant Farming Area of Zimbabwe: Ecological Determinants and Present and Past Use' *Forest Ecology and Management* 63, pp.97-133.

⁸³ See K. Wilson, 1989 'Trees in Fields in Southern Zimbabwe' *Journal of Southern African Studies* 15(2), pp.346-369.

⁸⁴ Detailed in McGregor, 1991, chapter 2. See Wilson, this volume on the problems of attempting to implement the standard package in semi-arid areas with rich, heavy clay soils.

⁸⁵ Interviews, Shurugwi, 1987-9.

⁸⁶ Interviews, Shurugwi, 1987-9.

⁸⁷ Cf. K. Wilson 1986, 'Background paper: the problems of woodland and veld' (ms).

⁸⁸ Interviews, Shurugwi 1987-89.

⁸⁹ The younger generation in particular, are deprecating about those 'still living in the bush'.

⁹⁰ Morris Gambiza, 28.10.87.

⁹¹ Interviews, Shurugwi, 1987-9.

⁹² For further detail on these and other types of land spirits, see Schofeleers *Guardians of the Land*. There are regional differences in the role and nature of *mhondoro*. On the importance of the claim to having arrived first, see I. Kopytoff (ed) *The African Frontier: The Reproduction of Traditional African Society* (Indiana University Press, 1987).

⁹³ See Mukamuri, this volume for a fuller description.

⁹⁴ Interviews, Shurugwi, 1987-9.

⁹⁵ Interviews, Shurugwi, 1987-9.

⁹⁶ See D. Maxwell, 1994 'A Social and Conceptual History of North-East Zimbabwe' (PhD, Univ. of Oxford) for a case study of the interaction of different Christian churches with land guardianship.

⁹⁷ Interview, Shurugwi, 16.11.87.

⁹⁸ Interview, Samuel Furusa, 20.10.87.

⁹⁹ Described in the training for the first four native forest officers, letter Conservator of Forests, 29.3.39. ZNA S1542 F9. Instructions regarding choice of land for planting reads: 'Land for tree planting is to be well-drained and carry adequate depth of soil usually indicated by good height of growth of indigenous trees'.

¹⁰⁰ Mr Futi, Shurugwi, 3.3.89.

¹⁰¹ Interviews, Shurugwi, 1987-9.

¹⁰² 'Native Enquiry – Oral Evidence' ZNA S988. The findings of the *Commission to Enquire into the Preservation of the Natural Resources of the Colony 1939* (The MacIlwaine Commission) should be subject to similar caution as this commission laid the foundation for the Natural Resources Act of 1941 and the subsequent establishment of the Natural Resources Board.

¹⁰³ See Phimister, 1988, p.275 citing S160/GC1 Acting Director of Native Agriculture, Salisbury, to Prov. Commissioner, Tanga, Tanganyika Territory, 23 June 1947; Phimister, 1986, p. 271; *Report of the Native Commissioner and Secretary for Native Affairs for the year 1936*, p.34.

