

Grace Carswell, *Soil conservation policies in colonial Kigezi, Uganda: successful implementation and an absence of resistance.**

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Introduction

Focusing on the area of Kigezi, in southwestern Uganda this paper examines the implementation of policies that arose out of growing concerns over soil erosion from the 1930s. Comparisons are made with other examples of similar schemes in East Africa. Kigezi differed from other schemes in colonial Africa, in that the policies were implemented with little resistance from the local population. The paper suggests that pre-colonial methods of preventing soil erosion, the gradual introduction of the policies, the emphasis on propaganda and incentives, and the efficient working of the structure of chiefs explain the success of the Kigezi scheme.

Kigezi, in the southwestern corner of Uganda, is an area of intensive agricultural production with a dense population that has, for decades, been perceived to be at risk from serious environmental degradation. Colonial officials put forward a number of policies to try to deal with problems as they saw them - namely land degradation, land shortage and fragmentation. This paper considers one such set of policies: those of soil conservation from the 1930s.¹ I focus on Kigezi and compare this case to four other schemes in East Africa, which had very different experiences. I aim to shed light on how policies were successfully implemented in Kigezi, where there was little large scale resistance. The article raises a number of questions around the technical success of conservation policies, the continued sustainability of the agricultural system in the face of increasing population and the social costs of the transformation that the district has undergone, such as increased differentiation, loss of swamps and increased landlessness.

From the 1930s the colonial state in East Africa became increasingly concerned with the environment.² Such concerns can be seen all over colonial Africa and there are a number of studies of areas where these concerns played a major influence in the formulation of agricultural policy.³ Many of these studies examine soil conservation policies in the context of the growth of nationalism and their role in this political process, and thus examine the success or failure of these policies in essentially political or social terms.⁴ Few examine the methods used by the colonial state to ensure their implementation,⁵ and even fewer look at success or failure of these policies in environmental, agricultural or technical terms.⁶ This is perhaps unsurprising, as there are few examples where these

* This paper has benefited from comments from Bill Adams, David Anderson, William Beinart, JoAnn McGregor and an anonymous referee. Colonial place names, for example Kigezi, have been retained as appropriate. The paper examines Kigezi District, although the focus of attention is on the area of present day Kabale District, around Kabale town, which was part of the larger Kigezi District during the colonial period.

¹ Other policies (including a resettlement programme and policies of consolidation, enclosure and granting of titles) and the responses of African farmers to them, have been examined elsewhere. G. Carswell, 'African Farmers in colonial Kigezi, Uganda, 1930-1962: Opportunity, Constraint and Sustainability' (PhD, SOAS, 1997).

² D.M. Anderson, 'Depression, dust bowl, demography and drought: The colonial state and soil conservation in East Africa during the 1930s', *African Affairs*, 83 (1984), 321-43. On Southern Africa see W. Beinart, 'Soil erosion, conservationism and ideas about development: A southern African exploration, 1900-1960', *Journal of Southern African Studies*, 11 1, (1984), 53-83.

³ See for example F. Mackenzie, *Land, Ecology and Resistance in Kenya, 1880-1952* (Edinburgh, 1998); J.L. Giblin, *The Politics of Environmental Control in NorthEastern Tanzania 1840-1940* (Philadelphia, 1993); G. Maddox, J.L. Giblin and I. Kimambo (eds.), *Custodians of the Land: Ecology and Culture in the History of Tanzania* (London, 1996). W. Beinart and C. Bundy, *Hidden Struggles in Rural South Africa: Politics and Popular Movements in Transkei and Eastern Cape* (London, 1987).

⁴ See L. Cliffe, 'Nationalism and the reaction to enforced agricultural change in Tanganyika during the colonial period', In L. Cliffe and J. Saul (eds), *Socialism in Tanganyika* (Vol 1) (Nairobi, written 1964, publ 1972); G.A. Maguire, *Towards 'Uhuru' in Tanzania: the Politics of Participation* (London, 1969); I.N. Kimambo, *Penetration and Protest in Tanzania: The Impact of the World Economy on the Pare, 1860-1960* (London, 1991).

⁵ Exceptions include S. Feierman, *Peasant Intellectuals: Anthropology and History in Tanzania* (Madison, 1990) and K. Showers, 'Soil erosion in the Kingdom of Lesotho: Origins and colonial response, 1830s-1950s', *Journal of Southern African Studies*, 15 2 (1989), 263-86.

⁶ Although this is attempted in various case studies in J.C. de Wilde, *Experiences with Agricultural Development in Tropical Africa*, 2 Vols, (Baltimore, 1967). Also see M. Tiffen, M. Mortimore and F. Gichuki, *More People, Less Erosion: Environmental Recovery in Kenya*, (Chichester, 1994).

policies were implemented successfully for long enough to enable technical measures of success to be made. But Kigezi is an area where a number of soil conservation policies were implemented successfully and this is the first study of the process of implementation and the reception given to the policies by the local population in Kigezi.⁷

Background to the area

Kigezi covers an area of approximately 2,000 square miles and lies at an altitude of between 1500m and 2759m above sea level. The mean annual rainfall is 1000mm, it is bimodal and precipitation is usually gentle and evenly distributed. Temperatures range between 9°C to 23°C. The district is made up of undulating hills with steep slopes. Many of the valley bottoms were once papyrus swamps, although most have been drained during the last 50 years, and are now cultivated or used for pasture.⁸ Kigezi has experienced an extremely long history of human settlement and in migration and agriculture concomitant with more permanent settlements was probably established around 2,000 years ago.⁹ Southern Kigezi is densely populated, which appears to be the result of both in-migration over a sustained period and high natural increase, and the population more than doubled between 1921 and 1959.¹⁰ Whilst statistics produced by early censuses must be treated with some caution, being unreliable extrapolations of very small surveys, they do suggest substantial increases in population. The proportion caused by natural increase, and that by immigration, is difficult to determine but high rates of in-migration from Rwanda are likely,¹¹ until the early 1940s from when migration was restricted.¹² In southern Kigezi, as a result of the dense population, relatively small acreages of land are available for farming, and the system of inheritance has resulted in the fragmentation of land holdings and widely scattered plots.¹³ It was estimated that by the mid-1940s the average acreage under cultivation was under 3 acres per taxpayer, which was equal to under half an acre per resident person.¹⁴

The people of Kigezi are Bakiga, Banyaruanda and Bahororo. Both Banyaruanda (found predominantly in the far south of Kigezi) and Bahororo (found predominantly in northern Kigezi) are caste societies made up of pastoralists (Tutsi and Bahima respectively) and agriculturalists (Hutu and Bairu). Kigezi is surrounded by such cultural areas in the form of Ankole and Ruanda, but the area of present day Kabale district is populated largely by Bakiga, who are not a stratified society, but have been categorized as a segmentary lineage society.¹⁵ Both long-term permanent migration¹⁶ and short-term labour migration¹⁷ have played a significant role socially, economically and politically in the history of this area. There is a long history of movement by families on their own initiative¹⁸ and migration needs to be seen as an inherent part of Bakiga life. Labour migration from Kigezi to southern and central Uganda was also very important to the economy of Kigezi district (in 1959 it was estimated that 40-50% of

⁷ See J.W. Purseglove, 'Land use in the overpopulated areas of Kigezi District, Uganda', *East African Agricultural Journal*, 12 (1946), 139-52; J.W. Purseglove, 'Resettlement in Kigezi, Uganda', *Journal of African Administration*, 3 (1951), 13-21; and E.R. Kagambirwe, 'Causes and consequences of land shortage in Kigezi', Makerere University, Department of Geography, Occasional Paper 23, 1973. These make no attempt to place these in the historical context nor assess solutions put forward by the colonial state, or farmers responses to them.

⁸ J.D. Jameson, (ed) *Agriculture in Uganda* (Oxford, 1970) 2nd ed, 47.

⁹ A. Hamilton, *et al* 'Early forest clearance and environmental degradation in South West Uganda,' *Nature*, 320, (1986), 164-7; D. Taylor, 'Late quaternary pollen records from two Uganda Mmires: Evidence for environmental change in the Rukiga highlands of southwest Uganda', *Palaeogeography, Palaeobotany and Palynology*, 80 (1990), 283-300. D.L. Schoenbrun, 'The contours of vegetation change and human agency in Eastern Africa's Great Lakes region: ca 2000 BC to ca AD 1000', *History in Africa*, 21 (1994), 302.

¹⁰ From 206,090 in 1921 to 493,444 in 1959, Kigezi District. Kabale District Archives and Uganda Govt Statistical Abstracts, 1966.

¹¹ B. Langlands, 'Population geography of Kigezi', (Geography Department, Occasional Paper 22, Makerere, 1971).

¹² J.W. Purseglove, 'Report on the Overpopulated Areas of Kigezi', (1945). This unpublished report was not located in any archives. A copy was obtained by the author from the Purseglove family.

¹³ J.M. Byagagaire and J.C.D. Lawrance, *Effect of Customs of Inheritance on Sub-Division and Fragmentation of Land in South Kigezi, Uganda* (Entebbe, 1957).

¹⁴ J.W. Purseglove, 'Kigezi resettlement', *Uganda Journal*, 14 (1950), 139-52.

¹⁵ P.T.W. Baxter, 'The Kiga', in A.I. Richards, *East African Chiefs: A Study of Political Development in Some Uganda and Tanganyika Tribes* (London, 1960), 283.

¹⁶ See B. Turyahikayo-Rugyema, 'A history of the Bakiga in south western Uganda and northern Rwanda c1500-1930', (Michigan, PhD, 1974).

¹⁷ See P.G. Powesland, 'History of migration' in A.I. Richards (ed), *Economic Development and Tribal Change: A Study of Immigrant Labour in Buganda* (London, 1954).

¹⁸ M.M. Edel, *The Chiga of Western Uganda* (Oxford, 1957), 18.

the total adult male population were absent from Kigezi at any one time¹⁹), although migration from Ruanda-Urundi into Uganda²⁰ has to some extent overshadowed migration within the country.

While there was no formal system of chieftainships amongst Bakiga, authority was exercised at a lower level, although sources disagree as to whether this authority was through the household, as argued by Edel,²¹ the clan,²² or lineage.²³ Edel's findings have been widely accepted.²⁴ Colonial administrators thus found no systems of government that they could recognise, understand and incorporate in order to establish an administration in Kigezi. This, however, did not alter the way that they established their administration; they did what they did elsewhere in Uganda, initially appointing Baganda agents as administrators. British administration of Kigezi District came relatively late in comparison with the rest of the Uganda Protectorate. It was not until after the Anglo-German-Belgian Boundary Commission of 1911 had settled the different colonial claims to the area, that civil administration began.²⁵ The politically peripheral status of the district continued throughout the colonial period, and its relative isolation (both geographical and political) had implications for the success of colonial policies, which were never harnessed by nationalist movements as was the case in other parts of East Africa.

Kigezi was divided for administrative purposes into counties (*sazas*), sub-counties (*gombolola*), parishes (*miluka*: pl; *muluka*: sing) and sub-parishes (*mukungu* or *mutongole*). With chiefs appointed at each level, a hierarchy of authority was established, each chief being directly accountable to his superior. All the chiefs (with the exception of the lowest rank) were salaried employees of the Administration, and for some years *bukungu* also received a small salary.²⁶ Initially Baganda agents were used at *saza* and *gombolola* levels,²⁷ but from 1922 the use of Baganda agents was phased out, and by 1930 three *saza* chiefs and all the lower chiefs were indigenous to the area.²⁸

The Native Authority Ordinance of 1919 set out the role of chiefs and gave them both executive and judicial powers.²⁹ The chiefs supervised tax collection and public works, and worked in the courts. From the beginning of British rule, the Government, through the chiefs, extended its control into a wide range of matters including private concerns such as bridewealth, famine reserves and methods of cultivation.³⁰ The chiefs were placed in an extraordinarily powerful position.

Sub parish [*mukungu*] chiefs are responsible for seeing that members of their sub-parish pay their taxes, register births, marriages and deaths, obey the veterinary, agricultural and sanitary regulations, perform their communal labour, maintain their famine reserves and carry out similar statutory obligations. They do this by exhortation and if that fails, by prosecution. In this they have to achieve a nice balance between not incurring the hatred of their neighbours by excessive keenness and not losing their jobs by incurring the wrath of their superiors.³¹

¹⁹ Western Provincial Annual Reports [hereafter WPAR].

²⁰ See Richards, *Economic Development and Tribal Change* and C.C. Wrigley, *Crops and Wealth in Uganda: a short agrarian history* (Kampala, 1959).

²¹ Edel, *The Chiga*, 3.

²² J. Roscoe, *The Bagesu and Other Tribes of the Uganda Protectorate. The Third Part of the Report of the Mackie Ethnological Expedition of Central Africa* (Cambridge, 1924).

²³ B. Turyahikayo-Rugyema, 'Bakiga institutions of Government', *Uganda Journal*, 40 (1982), 14-27.

²⁴ For example B.K. Taylor, *The Western Lacustrine Bantu: Nyoro, Toro, Nyankore, Kiga, Haya and Zinza* (London, 1962). Also Baxter, 'The Kiga', 278-310. On contemporary land ownership in Kabale see J. Bosworth, 'Land, Gender and ideology: the case of Kabale', (PhD thesis, 1996).

²⁵ See W.R. Louis, *Ruanda-Urundi 1884-1919* (Oxford, 1963), 79-91, 194-9. Also J.M. Coote (with postscript by H.B. Thomas), 'The Kivu Mission 1909-10', *Uganda Journal*, 20 (1956), 105-12. Also H.B. Thomas, 'Kigezi Operations 1914-17', *Uganda Journal*, 30 (1966), 165-73.

²⁶ Baxter, 'The Kiga'.

²⁷ B. Turyahikayo-Rugyema, 'The British imposition of colonial rule on Uganda: The Buganda agents in Kigezi, 1908-30', *Transafrican Journal of History*, 5 (1976), 111-33. For wider discussion of the use of Baganda agents see A. Roberts, 'The Sub Imperialism of the Baganda', *Journal of African History*, 3 (1962), 435-50.

²⁸ D.J.W. Denoon, 'The allocation of official posts in Kigezi 1908-1930', in D.J.W. Denoon (ed), *A History of Kigezi in South West Uganda* (Kampala, 1972); Baxter, 'The Kiga'. The *saza* chief of Bufumbira was known as the *Mtwale*.

²⁹ K.T. Connor, 'Kigezi', in J.D. Barkan, (et al), *Uganda District Government and Politics, 1947-1967* (Madison, 1977).

³⁰ Edel, *The Chiga*, 125-7.

³¹ Baxter, 'The Kiga', 289-90.

For the first time men from the area could be appointed with power over non-family members, and over people from different clans and lineages. Younger men could have authority over older men and this new local elite could intervene in what had previously been entirely family matters. For many years chiefs were able to execute their powers with little reference to anyone else. From the mid-1940s changes were introduced so that some of the powers of the chiefs were handed over to councils of both chiefs and elected members, the latter eventually forming the majority. In some cases chiefs succeeded in continuing to dominate their councils, and it could still be said in the mid-1950s that ‘chiefs, in their various capacities, are judges, legislators and executives.’³² It was not until the mid-1950s that the power of the chiefs was to change to any significant extent when the process of separating the judiciary from executive began to take place.³³

African chiefs thus had significant powers. In addition Kigezi had high levels of European administrative personnel throughout much of the colonial period. From 1934, in addition to the District Commissioner and Assistant District Commissioner, a District Agricultural Officer was dedicated to the district.³⁴ From then onwards staff levels increased continuously and the District Team consisted of the DC, ADC, DAO, DVO (District Veterinary Officer) and DMO (District Medical Officer). In the Department of Agriculture there were Assistant Agricultural Officers (AAOs), who until 1954 were all Africans. There was one AAO for each of the five *sazas* of Kigezi: they provided the link between the DAO and farmers, and their reports kept the DAO informed of all the agricultural news in the counties, alerting him to any problems.³⁵ In 1954 the Agricultural Productivity Committee recommended increased staffing levels for Kigezi, and some of the *sazas* were allocated European officers, who were known as Field Officers. This relatively high level of administrative support, and the policy of working through chiefs as much as possible, can be seen as fundamental to the successful administration of the district.

Kigezi was quickly incorporated into the Uganda administration through, for example, tax collection. From 1935 payment of both compulsory labour obligations (*luwalo*³⁶) and poll tax was commonly in cash.³⁷ Cash was earned through wage labour³⁸ and the sale of hides and of livestock (mainly small stock).³⁹ Kigezi was intricately tied into wider flows of salt and livestock in the region and was central to a food production system and market that straddled international boundaries and encompassed Ruanda and Ankole. The main crops grown were sorghum, peas, beans and sweet potato, and peas and beans in particular were traded. Throughout the colonial period the British attempted to introduce a variety of non-food ‘cash crops’ but none was a success as the British consistently failed to appreciate the vitality of the food crop sector in Kigezi.⁴⁰

Indigenous methods of soil conservation and early colonial encounters

Before examining policy implementation in the colonial period, this section will focus on Kigezi’s situation during the very early stages of colonial rule: outlining indigenous methods of erosion prevention and examining earliest policies. Given that Kigezi is an area with a long history of agriculture and in-migration it is probable that the pre-colonial Bakiga agricultural system was highly adaptive to demographic pressure through agricultural change, relatively innovative and included significant soil conservation practices.⁴¹ Observations by early administrative officers and visitors to the area note indigenous methods of soil conservation. Roscoe visited Kigezi in 1919-20 before any colonial measures had been introduced and remarked how ‘ridges’ formed by gathering together weeds and stones resulted in the fields forming ‘regular plateaux’ that looked like terraces.⁴² An administrative officer, Elliot wrote of the period 1920-25 that ‘there was not much pressure on the land at that time

³² Baxter, ‘The Kiga’, 289.

³³ Kigezi District Annual Report 1915-16 and WPARs 1925, 1931, 1945, 1949 and 1956.

³⁴ Except for a two year period, 1939-41, when Kigezi shared a DAO with neighbouring Ankole District.

³⁵ For example Monthly reports 1949-51 to DAO from Ag Asst, Kabale District Archives, Papers of the District Agricultural Office [KDA DoA] 19/B/2.

³⁶ This initially involved each adult male working for 10 days, later increased to 30 days (2 sessions of 15 days each). WPAR 1933.

³⁷ These were introduced from 1912 and 1915 respectively. Initially payments were made in labour, and it was only after 1935 that payment by cash for these taxes became widespread.

³⁸ WPAR, 1922.

³⁹ See Kabale District Archives, Papers of the District Commissioner’s Office [KDA DC] MP23 1923 and KDA DC GENPOL.

⁴⁰ See Carswell, ‘African Farmers in Colonial Kigezi’.

⁴¹ For a collection of detailed studies of pre-colonial agricultural technologies, including terracing, ridging and irrigation see J. Sutton et al, in Special issue on ‘History of African Agricultural Technology and Field Systems’, *Azania*, XXIV (1989).

⁴² J. Roscoe, *The Soul of Central Africa: A General Account of the Mackie Ethnological Expedition*, (London, 1922), 101. Visit to Kigezi (1919-1920).

but some people were already starting terrace cultivation';⁴³ and 'had some idea of soil conservation.'⁴⁴ Snowden, an Agricultural Officer visiting the district in 1929, described how on the hillsides: 'cultivation starts at the bottom of the plot, so that the soil is gradually brought down and banks are formed on the foot of each plot. These banks tend to stop soil erosion to some extent.'⁴⁵

Discussing soil fertility in 1935, before any significant administrative effort had been expended in Kigezi, the Director of Agriculture wrote: 'In many densely populated counties the inhabitants have been driven by dire necessity to terrace their lands, and this practice already obtains in parts of Kigezi,'⁴⁶ suggesting that the indigenous system included aspects aimed at longer-term sustainability. The benefits of these methods were recognised by colonial officials and it was observed that in the Kigezi highlands 'the native has developed his own anti-erosion measures: he grows his crops in strips across the slopes, with intervening strips of uncleared land, and this system leads to the formation of natural terraces. In addition some individuals have built small terraces.'⁴⁷ The District Commissioner (DC) described the soil conservation policies that followed in the 1940s as being 'solidly grounded in traditional procedure'⁴⁸ suggesting that some officials acknowledged that they were adaptations of traditional methods.⁴⁹

Photographs from 1911,⁵⁰ 1935⁵¹ and 1938⁵² all of which pre-date administrative efforts in relation to soil conservation, illustrate indigenous agricultural practices. They show that cultivation was along the contour, and vertical 'banks' between plots can be made out.

Although evidence from the pre-colonial period is scanty, there seems little doubt that at this time the Bakiga agricultural system was highly adapted to local conditions. Bakiga sited their narrow plots along the contour and left strips between plots, so that over time 'ridges' or steps formed and the steepness of the plot gradient was reduced and terraces of sorts (or at least plots of a lower gradient) built up. Crops were planted along the contour, while the system of mixed cropping and use of legumes (with peas and beans being amongst the principal crops) helped to preserve soil fertility. Additionally, the use of trash lines and 'rough tillage' had the same effect.⁵³

The perception amongst colonial officials of there being 'a problem' with Kigezi agriculture grew during the 1930s, and policies were put into place at a local level to address this. As early as 1921, it was observed that land in southern Kigezi was intensively cultivated⁵⁴ and in 1929 concerns were recorded about the insufficiency of land for the population around Kabale.⁵⁵ In 1935, the District Agricultural Officer (DAO) Wickham observed that crop yields were falling because of soil exhaustion in a 10-mile radius of Kabale. He observed that it was probable that all crops in this area are ... deteriorating in yield, or quality. ...The reason for this state of affairs is clearly over population and soil exhaustion. There is not enough land available for the essential item in the rotation - fallow - to be included at the proper intervals. ...nearly all the land where crops are grown is on a steep slope, causing heavy erosion.⁵⁶

⁴³ Papers of J.R. McD. Elliot, Rhodes House [RH] MSS Afr s 1384, #33.

⁴⁴ Papers of J.R. McD. Elliot, RH MSS Afr s 1384, #2a.

⁴⁵ Snowden, Report to Director of Agriculture on Tour of Kigezi District, 16 Nov 1929. RH MSS Afr s 921, ff258.

⁴⁶ 'Notes on Preservation of Soil Fertility' prepared by Dir of Ag, Entebbe National Archives, Uganda [ENA] H175/1/II ff5 or H218/I ff16(1), quote re Kigezi para 24.

⁴⁷ J.D. Tothill, *Agriculture in Uganda*, (London, 1940), 87.

⁴⁸ Notes on the System of Land Tenure in Kigezi written by DC, for EARC, 1950. Public Records Office, Kew [PRO] CO 892 15/9 pg47.

⁴⁹ For a discussion of attitudes to African agriculture by officials involved in earlier schemes in Southern Africa, see Beinart, 'Soil erosion, conservationism and ideas about development'.

⁵⁰ Photographs of Major R.E. Jacks (Surveyor on Anglo-German-Belgian Boundary Commission, 1911). PRO CO 533/57.

⁵¹ Photographs of D.W. Malcolm, (Secretary to Lord Hailey, Visited Uganda Dec 1935 to Jan 1936). RH MSS Afr s 1445. Box 3, Album II - photo of Lake Bunyonyi with terraces in the background. Also Box 4, Album III - photo of hillsides showing contour cultivation, with strips or trash lines along contour.

⁵² Photograph in collection of Miss Edith Baring Gould, Church Missionary Society [CMS] Acc 28z5. Lake Bunyonyi, 1938. Can see 'steps' in background on hills around Lake Bunyonyi.

⁵³ Tothill, *Agriculture in Uganda*, 127.

⁵⁴ Letter to PCWP from JE Phillips, Acting DC, 26 Jan 1921, KDA DC MP69 ff2.

⁵⁵ Note on 'Land insufficiency around Kabale', 1929, by JE Phillips, DC, KDA DC MP69 ff34.

⁵⁶ Report for Year 1935 by Wickham, KDA DC AGR-MNTH ff53.

He estimated that the area cultivated by the average household had halved from 12 to 6 acres in the previous decade, and predicted that as yields fell there would be an increased tendency to encroach on land that should be left to fallow, resulting in an increase in the momentum of soil deterioration. Wickham saw the problem as having two related aspects - soil erosion due to cultivation of steep hillsides, and soil exhaustion due to continuous cultivation caused by overpopulation.⁵⁷ He warned that 'the position will inevitably and steadily become worse'⁵⁸ and the area might cease to be self-supporting in food.

G.B. Masefield,⁵⁹ who replaced Wickham as DAO in 1937, made similar observations and expressed concern about the effect falling yields were having on the ability to collect sufficient famine reserves.⁶⁰ In some areas he found little cultivable land resting and 'scarcely any' available for expansion, while grazing land was contracting and the number of stock increasing.⁶¹ Masefield quickly established a programme of propaganda and anti-erosion measures and began advising missionaries as to ways of protecting land they leased.⁶²

By late 1937, Masefield was concentrating propaganda work on anti-erosion measures.⁶³ He asked the DC to help in 'spreading knowledge of these measures, whether by speaking in *lukikos* or otherwise.'⁶⁴ The notes he circulated to his staff and chiefs included advice that plots should be in strips across the slope and should be no more than 30 yards down a slope (or 20 yards on steep slopes) and that there should be a 5 yard strip of grass between plots. He recommended building 'ridge terraces' at the bottom of the plot, running along the contour, and using a 'sod bank', hedges or grasses, contour rows of mulch, weeds and crop debris to help terraces form. The introduction of improved crop rotations was also advised.⁶⁵ It is clear that these measures, in particular having plots along the contour with strips of grass between plots and 'ridge terraces' at the bottom of the plots, were actually adaptations of methods already in use. This may explain why the policies were relatively readily accepted by farmers.

Masefield's policies were carried out not merely through Agricultural Department staff but largely through the network of chiefs.⁶⁶ Thus by 1938, before soil conservation policy had been formalised in Uganda as a whole,⁶⁷ the concerns of local officials and the presence of Masefield, a recently-trained, dynamic DAO with a particular interest in soils, meant that soil conservation measures had begun in Kigezi and were one of the routine subjects discussed by officials while on tour.⁶⁸

In addition to such propaganda, demonstration plots were also used. Masefield believed that talking about anti-erosion measures was of limited use, and that the use of demonstration plots that were 'properly terraced' was much more effective.⁶⁹ By mid 1938 about seven demonstration plots had been established.⁷⁰ He suggested that the

⁵⁷ Letter to DC from Wickham, DAO, Kabale, 5 Sept 1935, KDA DoA 009exp-c ff10. Note that soil 'erosion' (e.g. sheet or gully erosion) and falling soil fertility or soil exhaustion are sometimes used interchangeably.

⁵⁸ Report for Year 1935 by Wickham, KDA DC AGR-MNTH ff53.

⁵⁹ Masefield was DAO in Kigezi from Feb 1937 to June 1938. He had been educated at Winchester and Oxford. He received a Colonial Agricultural scholarship with the first year at Cambridge and second at the Imperial College of Tropical Agriculture in Trinidad. From ICTA he was posted to Uganda, and after periods as DAO in Ankole, Kigezi and Mbale he was appointed Soil Conservation Officer in Buganda. Masefield recalled that his interest in soils began as an undergraduate at Oxford: 'I was thrilled with soils... I don't know why, but I just took to soils and that is why I took to soil conservation.' Interview 18 April 1996. His career after leaving Uganda is of significance as he went on to an Oxford lectureship and wrote several books on the subject of tropical agriculture.

⁶⁰ Notes on Food Crops and Famine Reserves in Kigezi, Masefield, May 1937. KDA DC AGR-MNTH ff81.

⁶¹ Monthly report, July 1937, by GB Masefield, KDA DC AGR-MNTH ff87.

⁶² Letter to Dr NM James, CMS, Syira, PO Kabale from Haig, Senior Ag Off, K'la, 13 July 1937. Also letter of 30 Aug 1937 - Letter to Senior Ag Off from Masefield, (DAO) KDA DoA 009crops.

⁶³ Monthly Report for Oct 1937 by Masefield, KDA DC AGR-MNTH ff95.

⁶⁴ *Lukikos* were meetings held by officials with the local population during safaris around the district. Letter to DC from Masefield, DAO, 23 Oct 1937, KDA DC AGR6I ff2.

⁶⁵ Letter to DC and DMO from DAO, 18 March 1937. KDA DoA 010crops.

⁶⁶ Interviews with elderly men and women, Kabale District, July-September 1995. For details see Carswell, 'African Farmers in Colonial Kigezi'. Also interview with Masefield, 18 April 1996.

⁶⁷ In other parts of the colonial world, for example Southern Africa, soil conservation policy had already been formalised and ridges were being advocated. See Beinart, 'Soil erosion, conservationism and ideas about development'.

⁶⁸ Subjects covered at *lukikos* on safari included: coffee mulching, timber and black wattle planting and the planting of contour erythrina hedges to avoid soil erosion. See ADC, Wright's Safari in Rukiga, 15 Feb 1937 to 3 March 1937, KDA DC MP139 ff34.

⁶⁹ Letter to Senior Ag Officer from Masefield (on leave), 26 May 1938, KDA DoA 11/A/1 ff4.

⁷⁰ Interview with Masefield, 18 April 1996.

training of agricultural instructors be made more relevant to districts outside Buganda, and that more attention be paid to the agricultural instruction of women. In later years efforts to reach women were increased and, as will be seen, they were, for example, included as participants in courses. Archival sources unfortunately failed to reveal anything specifically about the reactions of women to the conservation policies, which is unfortunate as they probably did the greater proportion of physical work on fields, including for example maintaining soil conservation measures.

Masefield was transferred to another district and in early 1940, Stuckey, his successor, expressed concern about soil erosion on land leased to Europeans for pyrethrum cultivation⁷¹ and to missionaries.⁷² Stuckey recommended that more land be fallowed, that strip cultivation (with bands of uncultivated land running on the contour to help check erosion) be introduced to enable land to be fallowed, and that very steep and badly eroded areas be taken out of cultivation altogether.⁷³ Commenting on these recommendations, the PAO said that bunding has not been suggested as to attempt this would be a work of considerable magnitude. I think that this strip cropping will serve the purpose, and if a success it will be a useful demonstration of something which other people in Kigezi are much more likely to follow than bunding.⁷⁴ However, as we shall see, both strip cropping and bunding⁷⁵ were ultimately used in Kigezi, and it was bunding that was more acceptable to Bakiga farmers, being closer to indigenous methods and taking less land out of production.

At a national level concerns over the threat of soil erosion also emerged, although Kigezi received little attention and it was not until after a tour in July 1941 by the Deputy Director of Agriculture that the extent to which anti-erosion measures were already being carried out in Kigezi was fully appreciated by senior officials. He reported that Kigezi was 'intensively cultivated with plots on very steep slopes. ... There has, however, been an almost spectacular development of lines of elephant grass at the tops and bottoms of plots.'⁷⁶ In 1951 the Deputy Director of Agriculture, Watson compared the district then to 1938 when 'the farming pattern was ...a 'patchwork' type, with no attempt being made to preserve or improve the land'. He noted 'it is obvious that spectacular advances have been made in the matter of reorientation of holdings coupled with a more rational type of general agriculture.'⁷⁷ His comment reveals something very important about the attitudes of colonial authorities, and that was the failure to recognise that while the indigenous system may have resulted in 'patchwork' cultivation, it was not necessarily ignorant of soil conservation. Although as shown above, officials such as Elliot (in 1920-25) and Snowden (in 1929), did recognise the benefits of the indigenous system. McCombe, DAO in 1941-42 saw the benefits of the system in place and observed that 'Kigezi had an established system of planting elephant grass on the contour and what I have introduced is an addition to and not a disturbance of the older system.'⁷⁸

As we have seen the indigenous system of Bakiga agriculture included a number of important elements (legumes, rough tillage, trash lines and cultivation that led to the formation of ridges) to ensure the sustainability of the resource base. The first anti-erosion measures put into place by Masefield (elephant grass strips and recommended plot width of 30 yards) and McCombe (similar to the earlier measures but with narrower plots) were modifications to the indigenous system, and so could be adopted by the local population with relative ease. As the colonial period progressed there was a gradual move towards a more orderly system of agriculture. Up to the early 1940s, Kigezi, not being a major cotton or coffee producing area, was not a part of wider national discussions about

⁷¹ Letter to Sen Ag Off from Stuckey, DAO, 25 Jan 1940, KDA DoA 008. Also enclosure to Letter to Stafford from HB Thomas, Land Officer, 23 Jan 1940, setting out conditions on which Government agreed to cultivation of pyrethrum in Kigezi by Moses and Stafford. KDA DoA 008.

⁷² For example Bwama Island in Lake Bunyonyi, which was established by the CMS as a hospital and treatment centre for lepers in 1930/31. Letter to Senior Ag Officer from GF Clay, Dir of Ag, 7 Feb 1940, KDA DoA 008. Referring to letter to Director of Agriculture from Director of Medical Services.

⁷³ Letter to Senior Ag Office, WP from Stuckey, 18 April 1940, KDA DoA 008.

⁷⁴ Letter to Dir of Ag from EF Martin, Senior AO, WP, 1 May 1940, KDA DoA 008.

⁷⁵ Strip cropping is the method of resting and cultivating alternate strips of land. Bunds are vertical steps between plots of land. In situations where steps or banks already exist between plots bunds are relatively easy to adopt. But introducing bunds from 'scratch' is labour intensive and therefore more problematic.

⁷⁶ Report on Tour of Western Province, 7-19 July 1941, by Deputy Director of Agriculture, KDA DoA 11/A/1 ff6.

⁷⁷ Letter to DAO from TY Watson, Deputy Director of Agriculture, 2 Oct 1951, KDA DC AGR6I ff67.

⁷⁸ Letter to Senior Ag Officer from McCombe, DAO, 18 Jan 1943, KDA DC AGR6I ff11. For more detail re measures in McCombe's time see Letter to Saza Chiefs from McCombe, DAO, 29 June 1942, KDA DoA 11/A/1 ff7.

the threat of soil erosion.⁷⁹ The lack of attention given to Kigezi was to change quite suddenly and before long Kigezi's soil conservation measures were held up as an example to the rest of Uganda, indeed to the colonial world. Nevertheless measures were in fact in place before the 1940s, both indigenous systems and modifications and adaptations to those systems that were introduced by early DAOs. The following section will highlight the implementation of policies in Kigezi when attention focussed on the district before examining how similar policies were experienced in other colonies.

Implementation of soil conservation measures at district level - The Purseglove era - 1944-53.

This section will look at the implementation of soil conservation measures during Purseglove's era. The state employed the stick and the carrot in introducing these policies: the 'stick' of enforcement in which chiefs and regulations played a prominent role, and the 'carrot' of propaganda, competitions and educational courses. Adverse weather conditions resulted in food shortages across much of Uganda in 1943. Marketing regulations were tightened up and the purchase of African foodstuffs for resale or export was prohibited. The 'famine' as it was called⁸⁰ brought Kigezi's agricultural system under closer colonial scrutiny and the district quickly becoming a model for the successful implementation of conservation measures. This coincided with Purseglove's arrival as DAO. He was a catalyst for many new development initiatives, in particular the resettlement scheme and soil conservation policies that collectively became known as *plani ensya* meaning 'The New Plan' in Rukiga. This phrase entered the Rukiga language, and is still remembered today. Purseglove, who has been described as a 'Pioneer of Rural Development'⁸¹, had graduated in first position in 1936 from the Imperial College of Tropical Agriculture in Trinidad. Having developed an acute awareness of soil erosion, he was only too keen to put this knowledge into practice. He was appointed Agricultural Officer in Uganda in 1936, DAO Ankole and Kigezi 1938-39, before being appointed DAO in Kigezi in 1944, where he remained until 1952. The longevity of his stay may in part explain Purseglove's influence and impact.⁸² It has been said that perhaps one reason for his success was his great enthusiasm: he learnt Rukiga, was interested in Bakiga customs, and, for example, the use of medicinal plants. The impact that he made on Bakiga farmers is striking and many informants remembered him: Semu Kamuchana recalled 'Purseglove ... was a good man and looked after his workers well.'⁸³ Byagagaire told of songs written about Purseglove,⁸⁴ while Ngologozo also praised him, recalling the nickname that Purseglove was given: 'Kyarokyezire' meaning there is plenty of ripe ready food in their area.⁸⁵

Following the famine of 1943 and Purseglove's arrival in 1944 a committee was established in November 1944 to investigate and report upon Kigezi's overpopulated areas.⁸⁶ Consisting of an officer from Administration, Forestry, Veterinary and Agriculture Departments, the Committee had only one meeting; thereafter all the work was left to Purseglove. He carried out a series of traverses in a 12 miles radius of Kabale town to assess whether the areas were 'overpopulated', and if so to what extent. It is clear that before the study had even begun it had been decided that these areas were overpopulated, and the survey confirmed this. The population density of Kigezi district as a whole was found to be 155 people per square mile, while Ndorwa, one of the southern *sazas*, had a density of 210 people per square mile.⁸⁷

⁷⁹ See Carswell, 'African Farmers in Colonial Kigezi'.

⁸⁰ Despite the adverse weather conditions in this year of 'famine' it was not necessary to import food into Kigezi. Although little or no food was officially available for export throughout 1943, this had to be enforced through a 'strict system of frontier guards ... to prevent the export of foodstuffs from Kigezi [into Ruanda].' WPAR, 1946. The assertion that shortages were 'imminent' justified marketing regulations, which acted as a constraint on production and ultimately did more harm than good. The attempts to introduce marketing controls over food stuffs need to be seen in the light of colonial efforts to introduce a range of cash crops. See Carswell, 'African Farmers in Colonial Kigezi'.

⁸¹ E. Clayton, *Purseglove: A Pioneer of Rural Development* (Wye, 1993). Purseglove was thus the subject of the first monograph to be produced by Wye College on important individuals in Tropical Agriculture.

⁸² CV and Aide Memoir - RH MSS Brit Emp s 476.

⁸³ Interview with Semu Kamuchana (19/7/95 and 9/8/95). Interviews with other key informants, Kabale District, July - September 1995.

⁸⁴ Interview with J.M. Byagagaire, Kampala, 21 Sept 1995. Byagagaire, from northern Kigezi, worked alongside Purseglove during vacations while doing a diploma in agriculture at Makerere. He was Assistant Agricultural Officer in Kigezi 1953-57 and was the first African DAO of the District, appointed in May 1962.

⁸⁵ Ngologozo, *Kigezi and its People*, (Kampala, 1969), 94. Ngologozo was a Mukunga Chief from 1923 and rose to Chief Judge in Kigezi 1956 and Chairman of Appointments Board 1959.

⁸⁶ Purseglove, 'Report on the Overpopulated Areas of Kigezi', (1945).

⁸⁷ Purseglove, 'Report on the Overpopulated Areas of Kigezi', para 17.

Purseglove found that ‘The main problem at the moment is soil exhaustion... it would appear that overcultivation has resulted in soil exhaustion and a deterioration in soil structure, with a consequent reduction in the amount of water absorbed by the soil.’⁸⁸ Quoting from Jacks and Whyte, *The Rape of the Earth* he stated that ‘although serious erosion is not yet a problem we cannot afford to be complacent and wait for it to become so.’ He concluded that the area around Kabale could not continue to support an increasing population and that it would be ‘most unwise to continue under the present conditions in the hope that further soil deterioration and erosion will not take place.’⁸⁹ These findings confirmed earlier fears that serious environmental degradation was likely to occur unless dramatic steps were taken. The reaction to the report was to intensify soil conservation measures and initiate a resettlement scheme. Purseglove believed that grass fallows were essential to soil fertility maintenance. He suggested moving people out of the ‘over-populated’ areas into less populated areas to the north in order to increase the proportion of land resting and to introduce a policy of strip cropping with every third strip resting. In the areas left behind there would be some ‘reorganisation’⁹⁰ of agriculture, the distance between bunds would be further reduced (thus narrowing the strips) and a more orderly system of alternate strip cropping would be introduced. These policies, which collectively became known as *plani ensya*, differed from those of the earlier period in that they necessitated an increase in the proportion of land to be taken out of cultivation and demanded greater labour inputs.

It should be stressed that although Purseglove played a crucial role in bringing Kigezi to centre stage, his findings were not particularly groundbreaking or innovative. On the contrary many officials had previously discussed the problems of over-population, soil erosion and falling yields and by the time Purseglove arrived Kigezi’s reputation as an ‘over-populated’ district was firmly entrenched. Purseglove, however, greatly increased the attention that was focused on the district. The reputation of being seriously overpopulated and threatened with serious environmental degradation that Kigezi gained in this period is one that it has never been able to shake off. Researchers have consistently repeated many of these ideas, often without substantiation,⁹¹ and it is only recently that some of these myths, such as continuous cultivation, have been put to the test.⁹²

Following Purseglove’s report a great deal of energy went into the resettlement scheme⁹³ and the policies of *plani ensya*, central to which was strip cropping. Purseglove proposed taking all land on slopes of over 20° out of cultivation and introducing a system of strip cropping in which land would be rested in rotation with two years cultivation and one of rest under grass (or four and two respectively). The resting strip could be grazed. Plots would be a width of 16 yards on slopes of up to 15° and narrower on steeper slopes with bunds between the plots of at least three feet. Purseglove noted that ‘Once the system of strip cropping ... has been established, automatic control of the number of people on the land will be accomplished. One strip in three must always be resting and this can be maintained by the minimum of supervision by the Administration, agricultural staff and chiefs.’ He did, however, acknowledge that the main difficulty would be that strip lines, in the process of being reorganised, would cut across existing plots, and some reorganisation of tenure would be necessary.⁹⁴ As the 1940s progressed the soil conservation measures undertaken included strip cropping, bunding, introduction of more organised system of fallow, and encouragement of manure use.⁹⁵ Additionally, all paths had to be hedged, compost pits were encouraged and a variety of measures were applied to household compounds. The next section will examine how the administration ensured that these measures were carried out looking at both coercive measures: ‘the stick,’ and also measures based more on persuasion and incentives: ‘the carrot’.

⁸⁸ Ibid., para 13.

⁸⁹ Ibid., paras 13 and 93.

⁹⁰ Ibid., para 94.

⁹¹ For example *State of the Environment Report for Uganda*. (Ministry of National Resources, National Environment Information Centre, 1994), 26; E.M. Tukahirwa (ed), *Environmental and Natural Resource Management Policy and Law: Issues and Options, Summary* (MISR and Natural Resources and World Resources Institute, Washington, 1992); and F.D.K. Bagoora, ‘Soil erosion and mass wasting risk in the highland areas of Uganda’, *Mountain Research and Development*, 8 (1988), 173-82;

⁹² K. Lindblade, J.K. Tumahirwe, G. Carswell, C. Nkwiine and D. Bwamiki, ‘More People, More Fallow - Environmentally favorable land-use changes in southwestern Uganda’, (Report prepared for the Rockefeller Foundation and CARE International, 1996). K. Lindblade, G. Carswell and J.K. Tumahirwe, ‘Mitigating the relationship between population growth and land degradation: Land-use change and farm management in southwestern Uganda’ *Ambio* 27 (7) (1998) 565-571.

⁹³ On the Resettlement Scheme see Carswell, ‘African Farmers in Colonial Kigezi’. On its effects on the family see R.E. Yeld, ‘The Family and Social Change: A study among the Kiga of Kigezi, south west Uganda’ (PhD, Makerere, 1969).

⁹⁴ Purseglove, ‘Report on the Overpopulated Areas of Kigezi’, paras 98-99 and 102.

⁹⁵ Details of soil conservation measures in KDA DoA 11/A/1.

The Role of chiefs

Monthly reports sent to the DAO by Assistant Agricultural Officers confirm that by the late 1940s most soil conservation work was a matter of routine, and that colonial appointed chiefs played a crucial role in implementing these soil conservation measures. For example, it was reported that following a visit to an area where soil conservation measures had been neglected

steps were taken by the chiefs to see that new grass strips were well laid out. ... The chiefs and the Agricultural instructors were reminded about [the use of elephant grass]. ... it is hoped that good results will be achieved if the gombolola chief and muruka chief ... remain industrious and devoted. ...progressive work about soil conservation measures... is mainly due to the organising ability of the muruka chief.⁹⁶

Purseglove wrote in 1948 that the success of soil conservation measures 'has been achieved through the direct approach of departmental officers and the district team generally to the peasant farmers concerned working through the medium of the native authority.'⁹⁷ Colonial authorities thus placed much responsibility on chiefs for ensuring that their 'patch' followed the required measures; if they failed to do so, they were punished accordingly. Additionally, chiefs at each level (*saza*, *gombolola* etc) were responsible for ensuring that all the chiefs at the level below them carried out the work expected of them.

By working through this hierarchy the administration ensured that conservation measures were carried out, and it is clear that chiefs were punished without hesitation. In 1949 the *saza* chief of Ruzhumbura reported that he had 'dealt with' the *gombolola* chief of Kagungu, his minor chiefs and the Agricultural Instructor of the area about the 'negligency of the Soil Conservation work'. He tried the chiefs in the *saza* court and found that the *gombolola* chief was not helping his sub-chiefs and the Agricultural Instructor, and so he was warned that if he did not improve he would be fined.⁹⁸ Just a few days later the *saza* chief took this case further reporting that as no improvements in soil conservation measures were seen he had sacked one *muluka* chief and two *bakungu* chiefs, and fined four other chiefs.⁹⁹ Oral sources have confirmed that work was supervised by *muluka* or *gombolola* chiefs along with agriculture department staff.¹⁰⁰

Force of law

It is widely believed today¹⁰¹ that a soil conservation byelaw was in force throughout the colonial period, but in fact there was no such byelaw until 1961.¹⁰² Instead 'Agricultural Rules' made under the Native Authority Ordinance were enforced in the lower courts, and these Rules alone proved to be quite sufficient to ensure implementation. They were only clarified in 1954 when it was decided that all rules should be 'codified', consolidated into a pamphlet and issued to chiefs.¹⁰³ The fifteen Agricultural Rules of 1954 stated that: contour strips should be 16 yards wide or 10 yards on steep slopes, bunds must be 2 yards wide and permanent, alternate strip cropping should be practised where possible, grazing areas should be set aside where possible, and grass burning should only be done with the permission of a chief.¹⁰⁴ The Agricultural Rules were enforced by the lower courts and it is perhaps for this reason that no court returns, or details of punishments imposed have been located.

The authority that chiefs had in Kigezi is striking. If an individual failed to follow the soil conservation rules - for example if bunds were dug over and not replaced - that person was logged in the 'warning register' by the local chief and given 14 days to comply. Those who still failed to follow the rules would be taken to court and if found guilty would be fined, and ordered to comply within 7 days.¹⁰⁵ No archival evidence has been found as to precisely how work on *plani ensya* measures was enforced and informants were inconsistent in their replies as to

⁹⁶ Report on Agriculture in Bukinda by AAO, Rukiga sent to DAO, 25 Nov 1949, KDA DoA 19/B/2, ff56.

⁹⁷ Letter to Provincial Agricultural Officer (PAO) from Purseglove, DAO, 9 June 1948, KDA DoA 11/A/1 ff51.

⁹⁸ Letter to DAO from Kitaburaza, Saza Chf Ruzhumbura, 12 Nov 1949, KDA DoA 16/A/1 ff87.

⁹⁹ Letter to DAO from Kitaburaza, Saza Chf Ruzhumbura, 28 Nov 1949, KDA DoA 16/A/1 ff90. Also KDA DC AGR6I ff38. On actions against other chiefs e.g. Bubale, Ndorwa in 1950 - See Report by AAO, Ndorwa, 1 May 1950, KDA DoA 19/B/2, ff92.

¹⁰⁰ Interviews, Kabale District, July-September 1995.

¹⁰¹ For example amongst District Officials, Interview with Mutabazi, DAO, July 1995.

¹⁰² Telegram to PAO from DAO 5 Sept 1950, KDA DoA 16/A/1 ff113.

¹⁰³ Letter to DMO, DVO, DFO and DAO from DC, 6 Jan 1954, KDA DoA 11/A/2, ff1.

¹⁰⁴ Memorandum on 'Agricultural Rules' in letter to DC from DAO, 5 Feb 1954, KDA DoA 11/A/2 ff5.

¹⁰⁵ Letter to Saza and Gomb Chfs from DC, 3 Aug 1951, KDA DC AGR6I ff62.

who actually did the work.¹⁰⁶ Some said that it was just male tax payers; while others said that women and children also had to work. No court records survive of the punishments imposed for failing to carry out the measures, but oral evidence suggests that fines and short terms of imprisonment were the most common punishments, while working for the *gombolola* chief was also mentioned. It seems that the threat of a fine alone was usually enough to make a farmer implement the measures required.¹⁰⁷

On occasions some chiefs were over enthusiastic in their efforts to ensure that measures were implemented. In 1951 the Secretary General wrote to all *saza* chiefs saying that it was 'not desirable that married women should be compelled to work on the 'plani ensya' ...[nor should]... work on 'plani ensya' be done daily. This work should be done by men, girls, and boys only, and should only be done once every week.'¹⁰⁸ That such a warning was needed supports the view that chiefs had the authority to ensure that people turned up for *plani* and that some used this authority with over enthusiasm.¹⁰⁹ It is also of interest that while adult women were being excused from working on soil conservation measures, it was felt that they should attend agricultural education courses. This suggests some ambivalence in the colonial policies towards women's involvement in soil conservation measures.

The successful implementation of measures in the Kigezi scheme was noted with surprise by a Kenyan official following his visit to Kigezi. He was clearly particularly impressed with the degree of co-operation noting: The central administration seem able to persuade the tribal leaders of the desirability of soil conservation practices and good husbandry generally, and once persuaded, the chiefs and councillors seem to have little difficulty in enforcing good agricultural behaviour on their people. In the case of a particularly recalcitrant person, a fine of a shilling is apparently enough to make him change his ways.¹¹⁰ The official, who was himself in charge of the Makueni Settlement scheme, put forward a number of explanations for the high level of co-operation between the District Team and chiefs: firstly, the degree of continuity in administration; secondly, the power and prestige of chiefs; and thirdly, the fact that chiefs were also members of the native courts, so that they were often both prosecutor, judge and jury. His comment on this was that while it might 'seem an odd legal conception ... in the case of soil conservation measures, it appears to produce results. The senior native courts have powers of corporal punishment which they regularly exercise.'¹¹¹

Education and propaganda

As well as regulations and implementation with the 'stick' there was also a great deal of effort spent on trying to persuade and encourage the carrying out of soil conservation measures through education, competitions and propaganda. Purseglove established courses at Kachweckano, an experimental farm near to Kabale belonging to the Department of Agriculture that had been established in 1938. Attended by chiefs, employees of Agricultural Department, schoolteachers and others, these courses taught the rudiments of conservation methods.¹¹² Chiefs had to attend at least one course, at which lectures and practical demonstrations were given by the DAO. 'The main idea of the course was that people should understand the reasons why certain agricultural operations should be done throughout the district.'¹¹³ In the examination held at the end of the course the emphasis was on erosion and soil fertility. Lower levels chiefs also attended lectures, given by Agricultural Assistants, on a monthly basis.¹¹⁴

¹⁰⁶ Interviews in Kabale, July – September 1995.

¹⁰⁷ Interview with Kazlon Ntondogoro. Interviews in Kabale, July – September 1995.

¹⁰⁸ Letter to Saza Chfs from Ngol, Secgen, 23 Oct 1951, KDA DC AGR6I ff70.

¹⁰⁹ Here the Secretary General checked the actions of over-zealous chiefs unlike Chief Tengani in the Shire Valley of Nyasaland, whose 'dictatorship' is described by Mandala and who demanded strict compliance. His zealotness, succeeded in 'breaking resistance' to the scheme, generating support for nationalism and illustrating 'the potential of Indirect Rule for creating tyrants out of traditional rules'. E.C. Mandala, *Work and Control in a Peasant Economy* (Madison, 1990), 232-4.

¹¹⁰ Balfour (Officer in Charge, Makueni, PO EMALI) to The Commissioner, A.L.U.S., N'bi, 15 Sept 1950 reporting on Visit to the Kigezi Resettlement Scheme. PRO CO 892 15/8 ff1. Kenyan officials were interested in the scheme in the light of similar efforts being tried at this time in the Makueni and the Machakos Settlement Areas, in Kenya.

¹¹¹ Report by Balfour on Visit to the Kigezi Resettlement Scheme, 15 Sept 1950, PRO CO 892 15/8 ff1.

¹¹² At the first course 11 Gomb Chfs; 16 Muluka chiefs and 3 instructors attended. (List of Gomb and Muluka chfs going on course at Kachweckano - 1 July 1946 to 6 July 1946, KDA DoA 16/A/1 ff21.) At a second one held later in the year 17 gomb, 20 muluka chiefs and 6 members of Staff of Ag Dept (called 'instructors') attended. Letter to All Saza and Gomb Chfs, DC and PAO, WP from Purseglove, 4 Nov 1946, KDA DoA 16/A/1 ff31.

¹¹³ Letter to Saza Chfs from Ngol, SecGen 7 Nov 1947, KDA DoA 16/A/1 ff50.

¹¹⁴ Letter to DAO from [?illeg] SAA i/c Ruzhumbura 25 Feb 1953, KDA DoA 16/A/1 ff133.

Purseglove wrote in 1948 that the 'education of chiefs, instructors and teachers, by Kachwekano courses of the fundamental reasons for soil conservation and through them of the people themselves, has been an important factor in the scheme.... This approach [is] of greatest significance as no lasting result can be achieved unless the mass of the people understand the fundamental reasons behind the charge [sic change].'¹¹⁵ Byagagaire, an AAO in the 1950s, recalled that the most important thing was to 'first of all teach chiefs and public opinion leaders ...[about] why [the policies] were necessary. These are elders in the village - old men - they are not chiefs or councillors, but they are highly regarded in the village, their word is highly respected... you had to convince them.'¹¹⁶

Oral evidence confirms the widespread impact of these courses upon chiefs and ordinary farmers alike. It is noteworthy that by the 1950s many women were attending such courses. At the same time, however, women were excused from participating in weekly soil conservation work, and it seems that colonial officials were unsure of what stand to take with regards to women's involvement in these activities. The courses were an efficient way of 'spreading the word'. As one elderly informant Bishisha recalled: 'when they came back they organised public gatherings to tell people about what they had learnt [at Kachwekano].' The fact that people were very well informed about the reasons behind soil conservation measures suggests that the propaganda campaign to explain the measures was generally effective.¹¹⁷ Many informants confirmed that explanations for the reasons for the measures, combined with the threat of punishment, together ensured that the majority of people complied.¹¹⁸

Competitions were another popular feature of the campaign. In 1946 Purseglove introduced an annual soil conservation competition, which became an important event in the local calendar.¹¹⁹ A cash prize was awarded to the *gombolola* judged to have made the biggest advance in soil conservation work during the year, which was spent on a feast attended by people living in that *gombolola*, as well as by District Officials. Additionally small cash prizes were awarded to the *gombolola* chief, *muluka* chiefs and Agricultural Assistant,¹²⁰ which acted as an additional incentive to ensure that the measures were carried out.

Whenever other agencies of propaganda could be employed they were harnessed to Purseglove's scheme. The missions were involved in implementing soil conservation measures in so far as it was their responsibility to follow the guidance of the Agricultural Department on land they leased, or on which they had schools. The AAO in particular worked through mission employees and teachers,¹²¹ school farms were targeted and in 1949 a school garden competition was introduced.¹²² The Western Province Demonstration Team also had a role to play. During the Second World War Army Mobile Propaganda Units had toured Uganda giving displays and film shows and it was decided that these should be adapted for use in peacetime.¹²³ There was one entirely self-contained and fully mobile team in each Province composed of a leader and 12 members, all Africans, mainly ex-service men. They aimed, through films, plays and demonstrations, to 'arouse interest in and stimulate action towards improved standards both in the home and on the farm.'¹²⁴ From 1947 this team worked in Kigezi giving performances on agricultural matters amongst other things.¹²⁵ Following these performances, leaflets in the vernacular were distributed, which explained the causes of soil erosion and suggested ways to check soil erosion.¹²⁶

¹¹⁵ Letter to PAO from Purseglove, DAO, 9 June 1948, 'Land Utilization and Agrarian Reconstruction in Kigezi' KDA DoA 11/A/1 ff51.

¹¹⁶ Interview, J.M. Byagagaire, Kampala, 21 Sept 1995. He also recalled that they never toured the area by car, but always walked and camped. Similarly Audrey Richards insisted that colonial office anthropologists appointed in 1946 in Kenya and elsewhere should not have cars. (Thank you to William Beinart for this observation.)

¹¹⁷ See also articles in 'Kigezi Newsletter' (also known as 'AGANDI'). This was produced in Rukiga by the district administration from Oct 1950 - mainly propaganda about resettlement, agricultural competitions, etc. KDA DC SCW7-1-1 ff38a.

¹¹⁸ Interviews with elderly men and women, Kabale, July - September 1995.

¹¹⁹ Letter to PAO from Purseglove, DAO 19 July 1946, KDA DC AGR6I ff14. Also interviews.

¹²⁰ Results of 1958 Soil Competition, KDA DoA 218A ff30.

¹²¹ Report on Agriculture in Bukinda by AAO, Rukiga sent to DAO, 25 Nov 1949, KDA DoA 19/B/2, ff56.

¹²² KDA DC AGR6I ff39.

¹²³ On the background to the Colonial Film Unit created in 1939 see R. Smyth, 'British Colonial Film Policy 1927-1939', *Journal of African History*, 20 3 (1979), 437-50.

¹²⁴ Memo on role of Demonstration Teams by Dept of Public Relations and Social Welfare, by CMA Gayer, Dir of PR and SW, 2 Jan 1947. KDA DoA 11/A/1 ff38.

¹²⁵ Memo re organisation of WP Demo Team from Snowden, ADC, 21 May 1947, KDA DoA 11/A/1 ff43Enc.

¹²⁶ Letter to Purseglove from Dennis Carr, PR and SW Dept, Mbarara, 26 April 1947, KDA DoA 11/A/1 ff40. Leaflet on 'Soil Erosion', KDA DoA 11/A/1 ff40Enc.

The Western Province Demonstration Team played an important role in promoting the one aspect of soil conservation policies that ran into particular problems: planting temporary grass leys for grazing on resting strips. The policy was introduced in 1949 and presented the administration with some of its greatest difficulties. From the beginning there were reports of the Demonstration Teams having problems getting land on which to plant the leys and gathering people to work with them. In 1951, the Secretary General wrote to the *gombolola* chief in the area concerned encouraging him to gather his people on *plani* day to plant grass leys.¹²⁷ But problems continued and it was reported that in some areas ‘much if not most’ of the work was being nullified by inadequate weeding and the demonstration plots were poorly located being too scattered over the *gombolola* for people to appreciate their existence and usefulness. The plots often belonged to people with ‘very little interest in grazing them [who] therefore are not bothering to weed and maintain them properly. They seem to have very little idea of the underlying reason for the planting of these leys.’¹²⁸ As might have been expected, the chiefs were criticised for not making enough effort to encourage people to maintain and graze the plots but it seems that the problems went deeper and that this aspect of the soil conservation work was very badly thought out. From the lack of references to the policy of planting leys in the years that followed it seems that this aspect of soil conservation was quietly dropped from the agenda. Another aspect that largely failed was the ‘reorganisation’ of land left behind by resettlers, as suggested by Purseglove. This policy was also abandoned, largely because it involved changing plot boundaries and thus had implications for land tenure. In contrast to other areas (see below) agricultural officers in Kigezi both planned and implemented the measures to be introduced in the district. They were in a position to adapt or change the measures if problems arose and had the sense to drop interventions that were ill-conceived.

In most respects, however, soil conservation policies were implemented successfully. By the early 1950s it was reported from Kigezi that ‘cultivation has been developed on true strip cropping lines, which is now generally practised throughout the district.’¹²⁹ In 1950 the DC wrote of the ‘universal adherence’ to rules requiring both strip-cropping and bunding and stated that they were ‘well understood and diligently followed by the great mass of the people.’¹³⁰ In this respect, the experience of Kigezi stood in stark contrast to other parts of eastern Africa. Aside from the two minor policies discussed above, no references to any widespread feelings of opposition to the policies in Kigezi have been found.¹³¹

Reassessment in the 1950s

From the early 1950s there was a shift in conservation policies as colonial concerns about agricultural productivity became increasingly linked to issues of land tenure.¹³² This coincided with Purseglove leaving Kigezi, and with a change in DAO, the policies of the 1940s were reassessed. King, the DAO who replaced Purseglove, observed that the value of the resettlement scheme was often overstated, as it had never managed to keep up with the natural increase of population.¹³³ From the time resettlement began to 1953 22,000 people had been resettled, while population increase was estimated to have increased by 64,280 in the same period, so that it was ‘obvious that the problem had only been scratched.’¹³⁴ The scheme had also failed to reorganise the agricultural system in the way suggested by Purseglove. Like officials before him, King spoke of the problems of growing land pressure and decreasing areas for grazing. With a clear hardening of attitude he proposed further resettlement. Estimating that at least 50,000 people needed to be removed from Kigezi he recommended that married seasonal emigrants (to Buganda and elsewhere) should be made to take their families with them. As a marked decline in the birth rate was unlikely, he felt that resettlement was the only answer but noted that it would

¹²⁷ Letter to Gomb Chf Kitumba (copies to Saza Chf Ndorwa, DC, DAO and Demo team) from Secgen, 6 Oct 1951, KDA DC AGR6I ff68.

¹²⁸ Letter to DAO from G Symons, DVO, 27 March 1952, KDA DC AGR6I ff75.

¹²⁹ Notes on Shifting Cultivation in Western Province, by Purseglove. Prepared for EARC. PRO CO 892 15/7. Also letter to DAO from TY Watson, (Deputy Director of Agriculture) 2 Oct 1951. Following visit to Kigezi. KDA DC AGR6I ff67.

¹³⁰ Notes on the System of Land Tenure in Kigezi written by DC, for EARC, 1950. PRO CO 892 15/9 pg47.

¹³¹ In the early 1950s there was some criticism in the vernacular press about soil erosion measures in Buganda. Monthly Political Surveys: Uganda (EAF 96/15/01/A) SECRET file, PRO CO 822/381 - 1951-53. Even without a vernacular press in Kigezi one might expect to find references to discontent in the district archives, in for examples files on ‘Petitions and Complaints’ which were examined closely.

¹³² See Carswell, ‘African Farmers in Colonial Kigezi’

¹³³ Letter to PAO from King, DAO, 7 May 1953, KDA DoA 012-3 ff8. Further assessment and reports re Resettlement Scheme in KDA DoA 012-3 ff11, ff14 and ff17.

¹³⁴ Memo on Resettlement by Sub-Committee of Kigezi District Team (1953) KDA DoA 11/A/1 ff115.

‘not succeed unless very strong pressure is brought to bear and severe penalties inflicted on those who subsequently return.’¹³⁵

Other officials agreed that while the resettlement scheme had led to a ‘lessening of pressure’ the figures were totally inadequate. To get a ‘real breathing space’, about 100,000 people (i.e. 7 years increase) would have to be moved, which would ‘require a colossal organisation and an expenditure of about £250,000.’¹³⁶ DC Fraser felt, however, that ‘resettlement by itself is a somewhat sterile solution to the district’s problems’ as it would have to continue indefinitely on a very large scale. Instead, he suggested more effort should be put into finding ways for Kigezi to support a greatly increased population,¹³⁷ and the emphasis on soil conservation remained.¹³⁸

At around this time concerns over loss of grazing were increasingly expressed. The DVO Symons calculated that ‘within 8 years at the present rate, there will be no uncultivated land remaining.’¹³⁹ Symons was strongly critical of the strip cropping policy, observing that grass on resting strips was often of inferior quality compared to natural grazing with much weed and bush growth. Moreover it was very difficult to graze cattle, especially larger herds, on resting strips. He observed that often, particularly in grazing areas of northeastern Kigezi, a hill was opened up for cultivation and after three years, rather than cultivating the intermediate strips, further land was opened up higher up the hill. He wrote that ‘the obvious reason for this is that the Chiefs like to produce an orderly pattern of alternate strips and the more strips then the more points they consider they will score for the Agricultural Competition. This is an obvious waste of grazing lands.’¹⁴⁰ The Agriculture Department itself admitted in the early 1950s that alternate strip cropping was a ‘wasteful method of land utilisation’ and it was virtually impossible to graze the resting strips. Instead a ‘block layout’ was suggested with parallel strips along the contour separated by grass washstops or bunds of about three yards.¹⁴¹ This marked a return to something much closer to the pre-colonial indigenous system, and a system of horizontal plots separated by strips or bunds exists today, although the bunds or washstops are significantly narrower than three yards.

The evidence thus suggests that the system of alternate strip cropping introduced during Purselove’s time in office had been applied too broadly and over too wide an area. In applying a single formula, grazing lands had in fact been excessively reduced in some areas. The shift in policy towards the promotion of block cultivation had been suggested by the Deputy Director of Agriculture as early as 1951 following a visit to Kigezi¹⁴² but it was not until 1954 that experiments began in Ruzhumbura to test the effectiveness of block cultivation.¹⁴³ In 1956 it was agreed that in certain areas ‘better use can be made of the land if the system of alternate resting and cultivating strips is abolished and block cultivation introduced.’¹⁴⁴ During the mid 1950s there was an increased emphasis on a ‘more rounded’ approach to soil conservation, and this meant a return to something closer to the pre-colonial indigenous systems of soil conservation.

East African comparisons.

To appreciate the exceptionality of Kigezi’s experience of colonial soil conservation policies we need to consider the broader picture of colonial rural development programmes throughout eastern Africa.¹⁴⁵ The striking difference between Kigezi and other places where soil conservation measures were implemented on so large a scale is the lack of opposition to the proposals in Kigezi. This section will explore Kigezi’s apparently anomalous position. There are a number of reasons that might contribute to the success or failure of a soil conservation scheme, which fall broadly into three categories. Firstly, the nature of the measures being introduced (for example their closeness to the indigenous system of agriculture and the amount of labour required to carry them out). Secondly the

¹³⁵ Letter to PAO from King, DAO, 7 May 1953, KDA DoA 012-3 ff8.

¹³⁶ Letter to Dir of Ag from Todd, DAO, 8 March 1954 ‘Kigezi Ag.al Policy’. KDA DoA 11/A/2 ff9.

¹³⁷ Letter to PCWP from Fraser, DC, 3 Feb 1954. KDA DoA 11/A/2, ff3.

¹³⁸ Letter to ‘All in charge, Sazas’ from DAO, 2 Sept 1954 re tour of Kigezi during August. KDA DoA 11/A/2 ff27.

¹³⁹ Letter to DC from GB Symons, DVO, 12 March 1953, KDA DoA 13/A/1 ff318.

¹⁴⁰ Letter to DC from GB Symons, DVO, 12 March 1953, KDA DoA 13/A/1 ff318. Also mentioned in letter to Saza Chf Ruzh from King, DAO, 8 May 1953, KDA DC AGR6I ff201.

¹⁴¹ Annual Report of the Department of Agriculture, 1953, 42-3. Also Annual Reports for 1954 and 1955.

¹⁴² Letter to DAO from TY Watson, 2 Oct 1951. KDA DC AGR6I ff67.

¹⁴³ Extracts from Minutes of Kigezi District Team Meetings in KDA DC AGR6I and KDA DoA Teammins.

¹⁴⁴ Letter to Secgen, Saza Chfs and Field Officers from EW King, DAO 23 May 1956, KDA AGR6II ff30.

¹⁴⁵ M. Stocking, ‘Soil conservation policy in colonial Africa’, *Agricultural History* 50 (2) 1985. This examined policy in nine African countries.

methods by which measures were implemented (the use of propaganda and education and the length of time taken to implement them), and thirdly the effects of such measures on existing social and political structures (including the effect of existing systems of land tenure and the presence of local political tensions and of nationalist politics). With these broad categories in mind, four other schemes¹⁴⁶ will be outlined and contrasted with Kigezi.

Uluguru Land Usage Scheme, Tanganyika.¹⁴⁷

The Uluguru Land Usage Scheme (ULUS), introduced during the early 1950s, was designed to 'improve' the land in the Uluguru Mountains through the construction of bench terraces and the introduction of other conservation measures. Discontent over terracing became a 'vehicle of protest against Native Authority,'¹⁴⁸ led to rioting in 1955, and the scheme had to be abandoned. Various reasons have been put forward for the failure of the scheme and the first major study by Young and Fosbrooke looks at reactions to the scheme in terms of local political dynamics and conflicts into which discontent over terracing fed. While it is impossible to say if discontent would have become apparent had it not been for the existence of these local political tensions and divisions, it is clear that the conservation scheme played a significant part. Over most of the area the difference between bench terracing and the methods already in place was much greater than was the case in Kigezi. Maack has observed that the residents of Mgeta on the western side of the mountains had practised terracing since the early 1900s, and that its benefits were clear in this environment.¹⁴⁹ In this area the people were in general 'sympathetic with the broader ULUS'¹⁵⁰ and the measures were more successfully implemented, supporting the view that closeness to the existing system of agriculture was important.

The labour inputs required for the construction of bench terraces was large and colonial officials initially introduced targets of 'yards of terraces' to be built. When this failed, all taxpayers had to work on the terraces for three days a week.¹⁵¹ This was an extraordinarily high demand to make and it is entirely unsurprising that the policy was hugely unpopular. In addition to being very costly to introduce in labour terms, it was found that bench terraces were actually totally inappropriate for the area; indeed with the exception of the western side, they were detrimental to the soil. Tests showed bench terraces were unsuitable given the fragility and thinness of the soil,¹⁵² and officers in the field themselves questioned their suitability. These officers, however, were not in a position to adapt, change or drop policies when problems arose, as were those in Kigezi. In Uluguru bench terraces had a largely negative effect on the productivity of the area with yields on treated plots actually declining. The exception was the western area of Mgeta, where farmers could produce high valued foodstuffs on these terraces and thus 'for them terracing was a worthwhile effort.'¹⁵³ Iliffe has suggested that the failure to offer incentives in the form of cash crops to farmers, meant it was never worth while farmers investing time and labour into the measures proposed and this contributed to the scheme's failure.¹⁵⁴ In Maack's words 'the Waluguru resisted efforts to combat soil erosion because they derived few benefits from their labour.'¹⁵⁵ Overall, therefore, the measures being introduced can be seen to have been ill thought out and unsuited to the area, and without the incentives of high value crops to make the measures worth carrying out.

¹⁴⁶ See Carswell, 'African Farmers in Colonial Kigezi' for further comparisons with the Sukumaland Scheme and the Pare Development Plan.

¹⁴⁷ See also A. Coulson, 'Agricultural Policies in Mainland Tanzania', in J. Heyer (ed), *Rural Development in Tropical Africa* (London, 1981), 52-89; L. Cliffe 'Nationalism and the reaction to enforced agricultural change'; and Giblin, *The Politics of Environmental Control*. These studies examine soil conservation measures and reactions to them, in the context of political processes, and examine their influence on the growth of nationalist politics.

¹⁴⁸ See Young and Fosbrooke, *Smoke in the Hills*.

¹⁴⁹ P.A. Maack, 'We Don't Want Terraces!' Protest and Identity under the Uluguru Land usage Scheme' in G. Maddox (ed), *Custodians of the Land: Ecology and Culture in the History of Tanzania* (London, 1996), 159.

¹⁵⁰ See Young and Fosbrooke, *Smoke in the Hills*, 147.

¹⁵¹ Maack, 'We Don't Want Terraces!', 158.

¹⁵² Ibid., 156.

¹⁵³ Ibid., 160. Similarly in parts of Nyasaland there were cases of successful implementation, in Northeastern Chikwawa and on the Lulwe plateau, as well as in the Tchiri highlands, campaigns to promote ridge cultivation were successful. In areas of steep hillsides farmers found it 'reasonable' to adopt contour ridging, unlike the rest of the Shire Valley where opposition was strong. Thus while ridge cultivation may have 'made sense' to growers in hilly areas, it was not rational for farmers of flatter land, because ridges did not raise productivity and had high labour demands. E.C. Mandala, *Work and Control in a Peasant Economy* (Madison, 1990), 227-9.

¹⁵⁴ Iliffe, *A Modern History of Tanganyika*, (Cambridge, 1979) 474.

¹⁵⁵ Maack, 'We Don't Want Terraces!', 153.

The methods used to implement these measures have not been examined in great detail and how much 'persuasion' was used is unclear. Young and Fosbrooke have observed that 'the attempt to enlist the support of the clan leaders had limited success'¹⁵⁶ and the short timetable used to introduce this scheme may have been its greatest downfall. The scheme was first proposed in 1947 and the ambitious terracing programme introduced in 1950. This was very different from the gradual implementation of measures seen in Kigezi and was perhaps a case of 'too much, too soon'. The presence of local political tensions and rising nationalist politics must have assisted the articulation of discontent, and Iliffe has observed that 'drudgery and political conflict also killed the Uluguru scheme.'¹⁵⁷ Maack has noted that the Wuluguru felt betrayed by the Native Administration at a time when new forms of political expression were becoming available. Additionally the measures became associated with loss of land (as forced migration had been discussed earlier in connection with soil conservation measures) which added to suspicions about the scheme.¹⁵⁸

The officials failed to understand fully the Wuluguru land system, which included individual rights of ownership, individual use rights and complex patron-client relationships. Unsurprisingly farmers were unwilling to invest large quantities of time and labour on land that was not theirs. Young and Fosbrooke have observed that the ULUS 'struck at two sensitive topics: the land ... and the social system which governed the use of the land.'¹⁵⁹ Crucially, in the case of Kigezi, this was avoided. Individual security of tenure was strong in Kigezi, and although measures were attempted that would have threatened the system of land tenure in place (such as the 'reorganisation' of agriculture suggested by Purseglove following resettlement) these were quickly dropped by the administration.

Usambara Scheme, Tanganyika.

The Usambara Scheme was another ill-conceived scheme introduced in Tanganyika from 1950, which was eventually abandoned in 1957 due to opposition by the local population.¹⁶⁰ Here the measures being introduced were tie ridges on hillsides - both along the contour and down the hill, which created a grid of raised squares.¹⁶¹ Working these ridges necessitated digging in a way that was dramatically different from the indigenous system of working along the hillside¹⁶² and the labour demands involved in building the ridges were extremely high. The scheme began in 1950 with a controversial pilot project¹⁶³ and expanded slowly to 1952, then spread very quickly over the rest of Usambara. Over most of the area, and with little preparation, people were asked to introduce measures far removed from their system with an inadequate understanding of the reasons behind the measures. Implementation through enforcement was crucial.¹⁶⁴

The agricultural system in Usambara required flexibility, and the land tenure system enabled farmers to borrow land in order to exploit the highly variable local agro-ecological environment. The introduction of tie ridges made lending land problematic as people were not prepared to build ridges on land that they were only borrowing, while someone who had invested such time and effort into their land would be less inclined to lend it. Additionally if a borrower improved some land and then continued to use it, that person would, under local rules, have established some ownership claims to that land.¹⁶⁵

The feelings of discontent grew in Usambara and the scheme became 'enmeshed with opposition to the native authority'.¹⁶⁶ The Usambara scheme was thus another ill conceived scheme where the measures being introduced required impossibly large labour inputs, were inappropriate and far removed from the traditional system of agriculture. The measures threatened the agricultural and land use system that was in place. The speed with which policies were to be introduced meant that little time or effort was spent explaining the reasons behind measures and

¹⁵⁶ See Young and Fosbrooke, *Smoke in the Hills*, 147.

¹⁵⁷ Iliffe, *A Modern History of Tanganyika*, 474.

¹⁵⁸ For further details of the disturbances in Uluguru see PRO CO 822/807.

¹⁵⁹ Young and Fosbrooke, *Smoke in the Hills*, 146.

¹⁶⁰ Feierman, *Peasant Intellectuals*. Usambara Conservation scheme see PRO CO 822/1366. For further details see Carswell 'African Farmers in Colonial Kigezi'.

¹⁶¹ *Ibid.*, 181. This was called boxed ridging in Nyasaland. See Beinart, 'Soil erosion, conservationism and ideas about development', 71.

¹⁶² *Ibid.*, 188.

¹⁶³ Feierman, *Peasant Intellectuals*, 169-76.

¹⁶⁴ *Ibid.*, 176.

¹⁶⁵ Feierman, *Peasant Intellectuals*, 182-3.

¹⁶⁶ Iliffe, *A Modern History of Tanganyika*, 474.

coercion was relied upon over persuasion, such that implementation was largely through enforcement by the Native Authority. The lack of high value crops over most of the area meant there was little incentive to carry out the measures and with rising nationalism it was unsurprising that the growing political movement should harness this discontent.¹⁶⁷

Central Province, Kenya.

In Central Province a scheme of terracing was implemented through communal labour.¹⁶⁸ The system of implementation was one of coercion, not persuasion, and people were required to work two mornings a week, and those who failed to do so were fined.¹⁶⁹ As Throup has observed

the alternative strategy of attempting to educate the population to follow approved techniques of 'sound' land use was dismissed as too slow, since it was considered that immediate action was necessary.

Consequently the palliative anti-erosion measures were introduced without the understanding and support of the peasantry. This was a fatal error.¹⁷⁰

In Murang'a narrow-based terraces, which initially took less labour to build, but in the long-term had greater labour demands because of high maintenance needs, were considered by the administration to be most appropriate, but in fact were particularly unpopular. In addition there was little incentive to carry out terracing, as production of high value cash crops was not an option for these farmers. Elsewhere - Meru and Embu - broad based terraces and the opportunity to grow coffee meant that the measures were worthwhile and therefore more acceptable.

The high level of male migration meant that most work fell on women and they mobilised against the colonial regime. In April 1948 2,500 women marched to the District headquarters to inform officials that they refused to do the twice weekly communal work.¹⁷¹ Kenya African Union activists, under Kenyatta, played a crucial role in mobilising opposition to communal terracing which fed into wider discontent.¹⁷² Thus 'resistance to soil conservation schemes became a rallying point in the struggle against the administration, and its adherents.'¹⁷³ By the 1950s the Agricultural Department's belief that progressive cultivators should be rewarded with the right to grow high value crops began to be accepted by the administration and there was a move towards encouragement of individual enterprise, and in 1954, with the Swynnerton Plan, a commitment to the positive role to be played by small scale African producers. The Swynnerton Plan was in part a political device implemented as a counter-insurgency measure to the Mau Mau uprising. However 'compulsory terracing had destroyed any chance there might have been of gaining new collaborators as [the Kikuyu] had been irredeemably alienated from the colonial regime.'¹⁷⁴

Machakos, Kenya.

Efforts were also made to control soil erosion in the semi-arid Machakos District.¹⁷⁵ The rehabilitation programme included closing areas for rehabilitation, compulsory soil conservation works and destocking. Some years earlier in 1938 a policy of compulsory destocking had met with total non-co-operation and 1,500 Akamba marched to Nairobi, camping there for six weeks until the order was rescinded and the policy abandoned.¹⁷⁶ This, combined with concerns about loss of land to Europeans, meant that Akamba were deeply suspicious of government policies.

¹⁶⁷ For a detailed examination of how political and social cleavages enabled the articulation of discontent see Feierman, *Peasant Intellectuals*.

¹⁶⁸ D.W. Throup, *The Economic and Social Origins of Mau Mau, 1945-53* (London, 1988); D.W. Throup, 'The origins of the Mau Mau', *African Affairs*, 84 (1985), 399-433.

¹⁶⁹ Sorrenson, *Land Reform in the Kikuyu Country - A study in Government policy*. (Nairobi, 1967).

¹⁷⁰ Throup, *The Economic and Social origins of Mau Mau*, 70.

¹⁷¹ Mackenzie, *Land, Ecology and Resistance*.

¹⁷² *Ibid.*, 152-3.

¹⁷³ Mackenzie, *Land, Ecology and Resistance*, 2.

¹⁷⁴ *Ibid.*, 209-10.

¹⁷⁵ Tiffen, Mortimore and Gichuki, *More People, Less Erosion*.

¹⁷⁶ See J.F. Munro, *Colonial rule and the Kamba: Social change in Kenya Highlands 1889-1939* (Oxford, 1979).

The first attempts to introduce a mechanical soil conservation unit in 1946 met with popular resistance with people throwing themselves in front of tractors.¹⁷⁷ Initially all able bodied adults had to work communally for two days a week under the direction of chiefs and headmen but, as cultivation gave ownership rights under traditional law, people did not want soil conservation work done on their land by others even if it was for free. As in Murang'a the type of terrace being introduced in this area was the narrow-based terrace which was easier to build initially but, because of maintenance needs, required a larger long-term labour input, and was subject to collapse in storms. Bench terraces were thought to be inappropriate for African farmers due to the lack of tools and the time taken to build them - but once constructed they were more permanent and stable. From about 1949 some farmers began building bench terraces for the growing of vegetables and by the mid to late 1950s, when market access had improved, the adoption of bench terraces increased. Similarly there was a 'much greater and continued interest in bench terracing in higher hill areas, when this work could be directly associated with the introduction of new and profitable crops such as coffee.'¹⁷⁸ Machakos in the 1940s, however, did not offer the attractive farming opportunities seen for example in Nyeri, where from the 1950s bench terraces became acceptable as they were associated with the introduction of coffee, a highly profitable crop. This evidence therefore supports the argument that incentives in the form of market opportunities are crucial, combined with tenurial security, a persuasive approach and choice of technologies.¹⁷⁹

Conclusion

That soil conservation policies were implemented without opposition is in such stark contrast to other areas where similar attempts were made. Comparisons with such cases highlight some of the reasons for the apparently successful implementation and lack of opposition to the measures. The degree to which measures being introduced differed from indigenous methods of erosion control; the amount of additional labour input that was necessary to implement measures; the extent to which local conditions were taken into account in the formulation of these schemes¹⁸⁰ and the extent to which officials on the ground were able to adapt measures to local conditions were all critically important. In Kigezi the earliest colonial policies were essentially modifications of the Bakiga agricultural system. The Bakiga cultivated in a manner which led to the formation of 'steps' between plots; and when the first policy of planting elephant grass in strips between plots was introduced these were likely to have been along these ridges - thus being a modification of the indigenous system rather than a major transformation of it. As the colonial period progressed the obsession of the colonial authorities with the threat of soil erosion and their desire for 'orderliness' in agricultural systems grew, and more far-reaching measures were brought in, which coincided with the appointment of Purseglove as DAO. But the measures had begun some years before Purseglove arrived, and this gradual introduction of measures was crucial to successful implementation. In comparison to similar schemes elsewhere, in Kigezi greater effort was put into education, propaganda, and the provision of incentives, and thus the reasons behind conservation measures were generally understood. It is relevant that soil conservation was introduced over a long period in Kigezi, and although the Purseglove era saw a stepping up of the measures, the foundation which earlier policies provided was crucial. The role that Purseglove, a particularly dynamic individual, played is also significant, as was the longevity of his period in Kigezi. By working directly through chiefs, placing responsibility on them, and giving them authority to both judge and punish, the administration was broadly successful in getting conservation measures carried out. Additionally, suspicions of the government's motives, fears of losing land to Europeans and the rise of nationalism was critical ingredients missing in Kigezi, which in other areas facilitated the articulation of discontent. Finally and crucially, the Agriculture Department was flexible enough to drop those parts of the scheme that proved inappropriate (such as the planting of grass leys on resting strips and the 'reorganisation' of land left behind by resettlers), suggesting greater attention was given to local responses to policies than elsewhere.

From the time that Purseglove wrote his report in 1945 on the overpopulated parts of Kigezi, colonial administrators in both Uganda and London were most impressed by the district's progress soil conservation. By 1949 it was reported that in Kigezi 'soil conservation work has been spectacular and alternate strip cultivation on the

¹⁷⁷ de Wilde, *Experiences with Agricultural Development*, Vol 2.

¹⁷⁸ *Ibid.*, 97.

¹⁷⁹ Tiffen, Mortimore and Gichuki, *More People, Less Erosion*, 256.

¹⁸⁰ Mackenzie notes that with few exceptions (all of which were in Tanganyika) 'local conservation systems, their ecological specificity and their integration of biological with technical measures, were completely ignored in attempts to resolve the growing environmental crisis in colonial Africa.' Mackenzie, *Land, Ecology and Resistance*, 15. The evidence presented in this paper suggests that Kigezi is another such exception.

contour has now become an integral part of life in the district.¹⁸¹ The success was such that Kigezi became a 'show piece' for the administration and a visit to Kigezi became part of many official visitors' itineraries. The 'carrot and stick' method of implementation appeared to be successful and the success story of Kigezi has been repeated many times, including by outside observers.¹⁸²

In this paper therefore, I have argued that Kigezi's soil conservation policies were successfully implemented. There are examples of successful implementation of schemes being reported where very little changed on the ground,¹⁸³ but in Kigezi there is enough strong evidence to rule this out. There are, however, a number of different measures of 'success' and in the colonial situation manifestations of success or failure were being judged on political or social terms (as distinct from assessments on agricultural or environmental terms). It may be that Kigezi was seen as successful because the policies were introduced without strong resistance from local populations and so it was seen as politically and socially successful in the short term. Whether the policies were a success in the long run in the technical or agricultural sense, is however a different question: was it the implementation of policies that was successful, or the policies themselves that were a success? This question is difficult to answer, although research has shown that, contrary to popular belief, farmers have continued to maintain fallow periods in the face of growing population pressure, and have successfully maintained the sustainability of their agricultural system despite a steadily increasing population.¹⁸⁴ The social costs of the transformation that Kigezi has undergone are likely to include increased differentiation in the ownership of land and livestock, an increased occurrence of landlessness or effective landlessness, loss of land types such as swamps that reduced vulnerability in times of drought, increased reliance on remittances and possibly increased outmigration. There is a need for an examination of these factors in order to understand more fully the consequences of the changes that have occurred in Kigezi. There is no doubt that in the past farmers in Kigezi have been remarkably responsive to challenges to the sustainability of their production system. Whether they can continue to be so remains to be seen.

¹⁸¹ Letter to Chf Sec from JM Watson, for Dir of Ag, 29 Sept 1949, KDA DC AGR6I ff37. The word 'spectacular' was used in various reports and memos, e.g. PRO CO 536/222 40095 ff1.

¹⁸² Wrigley, *Crops and Wealth in Uganda*, 77.

¹⁸³ For example Thackwray Driver, 'Soil conservation in Mokhotlong, Lesotho, 1945-56: A success in non-implementation' (African History Seminar, SOAS, 1996).

¹⁸⁴ Lindblade *et al*, 'More People, More Fallow' and Lindblade, Carswell and Tumhairwe, 'Mitigating the relationship between population growth and land degradation'.