

**WETLANDS IN DRYLANDS:  
THE AGROECOLOGY OF SAVANNA  
SYSTEMS IN AFRICA**

**PART 3f:**

**Key resources for agriculture and grazing:  
the struggle for control over dambo  
resources in Zimbabwe**

**by Ian Scoones and Ben Cousins**

**IIED**

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**DRYLANDS PROGRAMME**

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THE AGROECOLOGY OF SAVANNA SYSTEMS IN AFRICA**

**Edited by Ian Scoones, Drylands Programme, IIED, London.  
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This review project was supported by the Swedish Agency for Research Cooperation with Developing countries (SAREC) and was coordinated by IIED, London. The review is a collaborative effort, drawing on the wide experience of researchers based in Europe and Africa.

The review is in three parts and is aimed at providing a broad overview of the role of 'valley bottomland' wetlands in savanna agroecosystems in Africa. The role of spatial heterogeneity and farmers' and pastoralists' responses to patchiness is often ignored by researchers, planners and extensionists. The review aims to map out the key issues and suggests a new way of interpreting savanna agroecosystems with important implications for future directions in agricultural and pastoral development in drylands areas.

**Part 1 by Ian Scoones: Overview - ecological, economic and social issues.**

The overview provides an introduction to the case studies (part 3) and the detailed assessment of biophysical aspects (part 2). It attempts to highlight key issues that run through all analyses of patch use within dryland agroecosystems. Bottomland agriculture and pastoral systems are investigated with a series of case studies. Questions of environmental degradation, land tenure and appropriate economic analysis are also explored. Part 1 concludes with a discussion of the implications for agricultural and pastoral development.

**Part 2 by Julie Ingram: Soil and water processes**

The review of soil and water processes examines the literature on soil processes by looking at interactions between top-land and bottomland in soil formation and movement. Bottomland wetland areas are placed in a landscape context by reviewing catchment level processes. In situ soil and hydrological factors are also examined. Part 2 concludes with an assessment of the potential impact of land use change on patchy wetland areas.

**Part 3: Case studies**

Part 3a by Are Kolawole: Economics and management of fadama in Nigeria.

Part 3b by Folkert Hottinga, Henk Peters and Sjoerd Zanen: Potentials of bas-fonds in agropastoral development in Sanmatenga, Burkina Faso.

Part 3c by Mohammed Osman El Samanni: Wadis of North Kordofan - present roles and prospects for development.

Part 3d by Zeremariam Fre: Khor Baraka - a key resource in Eastern Sudan and Eritrea.

Part 3e by Misael Kokwe: The role of dambos in agricultural development in Zambia.

Part 3f by Ian Scoones and Ben Cousins: Key resources for agriculture and grazing: the struggle for control over dambo resources in Zimbabwe.

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**PART 3f: KEY RESOURCES FOR AGRICULTURE AND GRAZING: THE  
STRUGGLE FOR CONTROL OVER DAMBO RESOURCES IN ZIMBABWE**

**Ian Scoones & Ben Cousins**

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## **1 Introduction**

The struggle for control over resources is often centred on those that are the most valuable for local production - the key resource patches of agricultural and livestock production. In Zimbabwe this sort of conflict is often focused on control over dambo resources. This case study provides a review of the forms and implications of these struggles for key resource control, providing an historical perspective and a number of case studies from different parts of Zimbabwe.

Section 3 concentrates on the use of dambos for agricultural purposes, sketching the historical patterns of use and the type of claims made over these resources both by local actors and the state. Section 4 provides a similar overview in relation to livestock use of dambos. A case study of a grazing scheme in southern Zimbabwe (Section 5) illustrates how conflicts arise over the appropriate form of grazing management.

The case study illustrates how key resource patches are central to resource management institutions and that external interventions have to be responsive to this. Local management of key resources therefore may provide an important route to supporting locally determined initiatives in resource management for agriculture and livestock.

## **2 Dambos in Zimbabwe: biophysical characteristics**

Dambos in Zimbabwe refer to a range of different features in the landscape; each with different biophysical features, but with a number of important common functional characteristics. Rattray et al (1953) have provided a definition of a dambo:

"A dambo is a low lying, gently sloping treeless tract of country which is seasonally waterlogged by seepage from the surrounding high ground assisted by rainfall and frequently contains the natural drainage channel for the removal of excess run-off from this surrounding high ground."

Whitlow (1989) estimates that there are 1.28 million ha of dambos in the country, or 4.6% of national land. This is probably a significant underestimate, as the survey did not include the dambos of the dry miombo zone of the south. These may be relatively difficult to spot on aerial photographs, but they are nonetheless important to farming and pastoral systems in the semi-arid areas. Much of the case material presented in this case study is based on dambo use in this part of the country (see Figure 1).

Figure 1a Agroecological natural regions in Zimbabwe

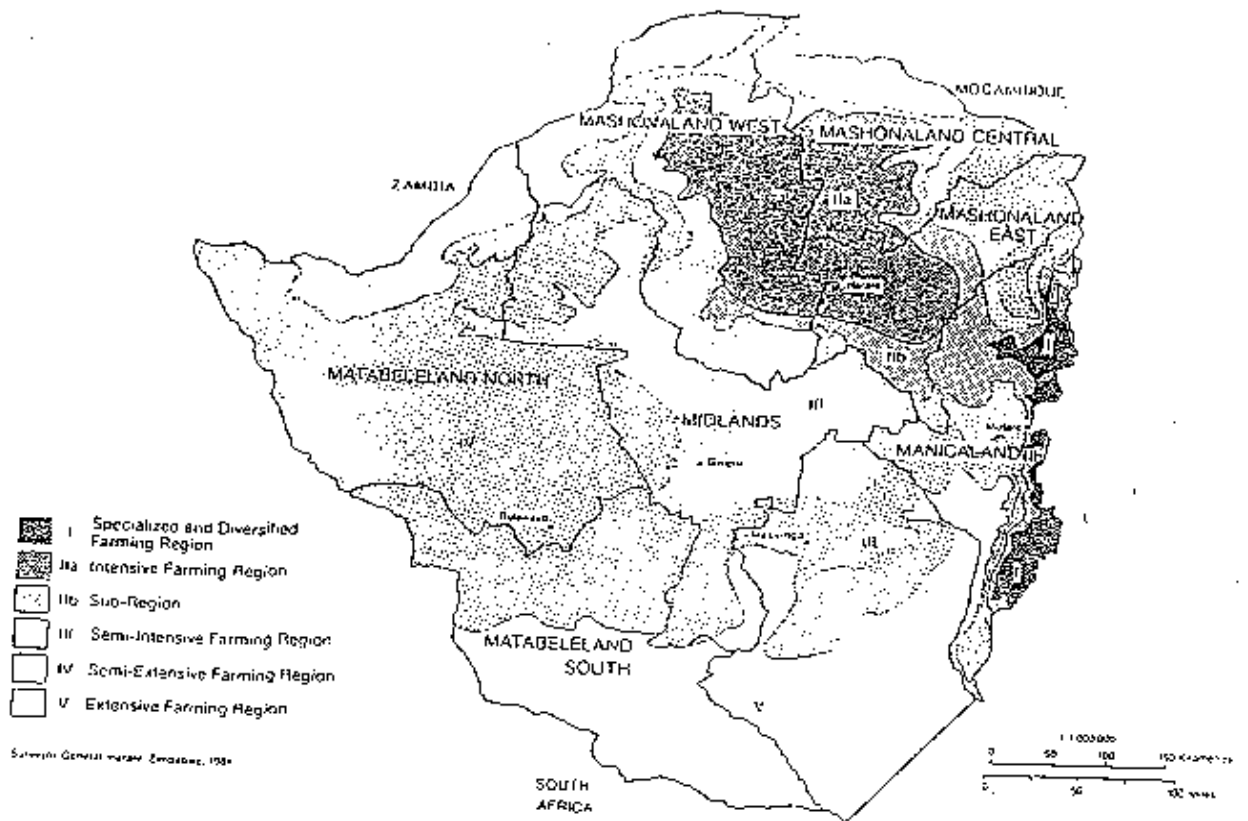
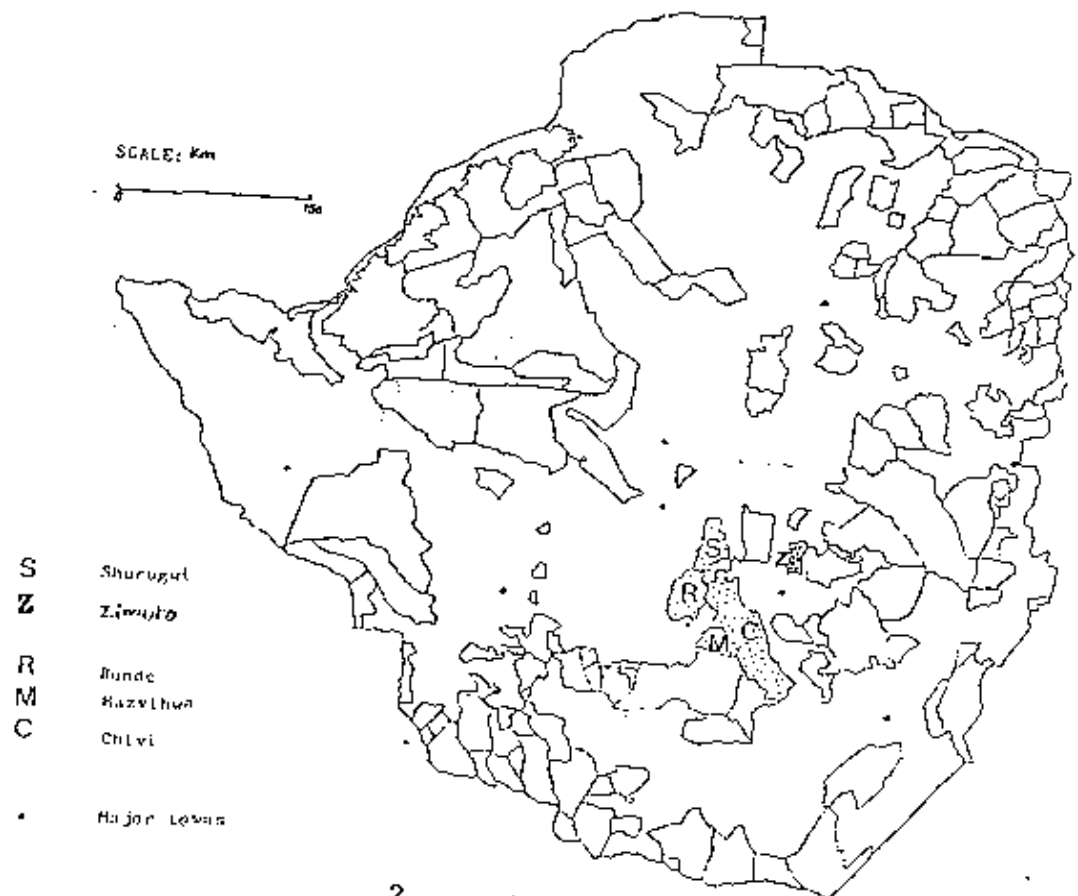


Figure 1b Position of study areas in Zimbabwe



Part 2 provides a detailed discussion of the different geomorphological types of dambo. For the purposes of this discussion, a simple distinction between 'dry' and 'wet' dambo will be made, for dambos in different parts of the county have different potential values for agriculture and livestock use.

The wet dambos of the highveld are often large, open areas with tall, rank grasses. These are characterised by waterlogging in the wet season and so may require some form of drainage to allow cropping. However dry season vegetable gardening is often viable. The sour grasses of these dambos mean that they are poor grazing unless burnt or grazed heavily. Improvements in grass quality may occur through heavy use where compaction of the soil may act to partially dry the dambo out and so encourage sweeter grasses.

The dry dambos of the miombo areas of the central south of the country may be either valley bottom dambos or perched dambos, where a clay sub-surface band retains water up-slope. These are particularly associated with granitic outcrops characteristic of this area. Dambos in the dryland areas of the country have fewer problems of wet season waterlogging. Simple ridging interventions allow successful wet season agriculture. Dry season cultivation, using residual moisture or micro-irrigation from shallow wells, is also possible. Dambos in this area tend to provide better grazing; the drier environment encouraging the more palatable grass species. However good grazing is again only maintained through use; otherwise rank grasses will invade.

Dambos in the dryland areas are particularly valuable. Although small in area, they can potentially be highly productive both for agriculture and grazing. Their value is centred on the fact that they act to stabilise production both seasonally and interannually. The stabilising properties of dambos will vary according to local topography, hydrology and soil properties. For instance, in some areas water rises in the dambo prior to the onset of the rains allowing early planting or late dry season green grazing in the dambo areas.

### **3 Key resources for agriculture: historical perspectives**

The role of dambos in agriculture in the semi-arid areas of Zimbabwe has varied over time. Several phases can be distinguished, where different factors of control are important. The pre-colonial situation of intensive use can be contrasted with the pattern of exploitation in the early part of this century and with the contemporary situation. Dambos have played differing roles within the agroecosystem, depending on the patterns of resource pressure and systems of control over use.

The nineteenth century pattern of use has been documented by Wilson (1986; 1990). Intensive use of dambo areas under a system of tribute labour organised by powerful patriarchs appears to have been the dominant pattern. Nineteenth century

travellers comment on this use. Thomas Leask, travelling in the central south of the country in 1867, noted:

"The hill was surrounded by rice gardens. These rice fields are in low swampy places and, the better to hold water, they are made in ridges like a turnip field or in beds much resembling a grave yard."  
(Leask, 1867, quoted by Wilson, 1986)

A pattern of agriculture centred on intensive use of small patches can be seen as a response both to local ecology and to political and economic circumstances. During this period the southern Shona peoples were largely resident in clustered villages situated in hilltop fortresses. This allowed protection from the raids of the Ndebele whose grazing territory stretched across the central south of the country. Agriculture concentrated on small dambo patches, typical of the sandy soil miombo environment of the granitic hill areas. This was in part a response to the insecurity of the plains areas. Local economic and political organisation also made dambo cultivation feasible. The ridging systems required the mobilisation of considerable labour resources. This was made possible with a pattern of close patriarchal clusters of kin-based settlement which required the payment of tribute labour to the 'big man' of the group. He was thus able to monopolise control of these key resources through zunde work parties which members of the large, polygamous family and others were obliged to attend. Commoners would have to rely on communal beer work parties (hunywe), if they had access to the dambo resource at all (Wilson, 1986: 2).

The patterns of dambo cultivation practised before the arrival of the plough are still remembered. The sites are often well known; in some places the ancient ridging systems are still evident:

"We have seen that the water can rise in the hills by late spring. These places are called nhivi (wet places), where the people used to farm...people used to grow shezha and rice." (Interview, Khuvhirimara, Chivi, 10.7.87)

Without ox ploughs, hoe cultivation and ridging required a lot of labour input. The mipanje ridges of the dambos were designed both to control water and soil movement and as a method to improve crop performance (eg through green manuring, providing good rooting depths etc.). People explain how ridges were constructed parallel to the stream flow if the dambo was too wet and required some drainage. But if conservation of water was the objective, ridges would be constructed at an angle or along the contour. The central area of the dambo was left with dense grass which was too difficult to clear. Crops were planted along the ridges with an intercrop of maize and rice closest to the stream channel. The maize would be planted on top of the ridge and rice in the depression. In years of heavy rainfall the rice would be successful, while the maize failed. In drier years the opposite would be the outcome.



Further away from the central water source, shezha (Coleus esculentus) would be planted on ridges or mounds. Beyond the boundaries of the main dambo, finger millet would be planted on the sandy soil fringes (sources: Interviews Chivi; Wilson, 1986, 1990; Mharapara, 1989).

The ridge cultivation system of dambo agriculture appears to have been highly sustainable. Fields were cultivated continuously and intensively, with several crops per year. Careful management of water flows and soil movement was vital to success. This required skill and large labour inputs. Informants recall the concern over soil erosion:

"In the old days we were also concerned with soil erosion...within the field there might have been some erosion, but there was so much grass that it was not serious and did not form gullies as the soil and water was trapped." (Dambo workshop, Mutonga 25.7.87)

With the cessation of Ndebele raiding following the colonial occupation, family groups increasingly were able to establish agriculture outside this tight control. The availability of extensive areas for cultivation and the possibility of ploughing large areas with the arrival of the plough enabled people to establish systems of extensive cultivation based on family labour and oxen draught input. Although providing variable returns this topland cultivation was a successful option for many. Large areas of land were opened up for cultivation during the 1920s and 1930s and the produce was increasingly marketed to emerging mining centres (Phimister, 1988).

Dambo and other bottomland cultivation was maintained to stabilise interannual variations of production from the topland and allow some dry season cultivation. The farming of dambos switched from one of intensive hand preparation to one of ox ploughing, thus reducing the labour input required. Dambo areas were no longer the central focus for agricultural production, rather an added bonus acting to stabilise overall production. The dambo resources were not available to everyone; the control of these resources was clung onto by the ruling lineages of the area. No longer able to mobilise tribute labour, they still recognised their value.

This value has increased as population pressure has restricted the option for extensive, opportunistic dryland cropping. With smaller and smaller areas cultivated per person the margins of safety provided by storage of topland derived crops from year to year has decreased. Dryland cropping as a sole enterprise has become increasingly a more risky option for ensuring food security. Alternative sources of income or food are necessary. The migrant labour economy of the region has provided a steady flow of remittances to the rural areas since the 1930s (Phimister, 1988). These help to compensate for the unreliable returns from dryland cropping. Another insurance mechanism is the use of dambos to provide high outputs and a guarantee of at least some food, even in droughts. Dambos have thus become

increasingly valued as populations have expanded and resource pressure has become more intense.

Local informants emphasise the importance of dambos for agriculture:

"The soil in the dambo is fertile ('strong') and provides more food... There is double the output compared to the sandy soils and three times the output of vegetables.." (Mawara, Murowa, 9.87)

"In a good year, if you plant early, you can have food throughout the year - maize, rice, finger millet, sorghum, vegetables, although bulrush millet does not do so well. In a bad year, rice suffers, but all the other crops do well and you can get a good harvest.." (Workshop, Murowa, 9.87)

"The dambo was first farmed in 1903.. it loses fertility, but if you add manure and termite soil no problems are faced.... it is easy to grow vegetables and other crops (twice a year) since the water is very near and it comes to the surface in the dry season." (Machokoto, interview, 9.87)

"The dambo has no holiday... the dambo never grows old" (Murowa workshop, 9.87)

In the last 25 years, dambos have become important sites for the market gardening of vegetables. This has been particularly the case in the wet dambos of the highveld, where dry season production with minimal supplementary irrigation is possible (DRU, 1987). In many cases this has become a highly successful commercial venture. This is particularly the case close to urban markets. The peri-urban cultivation of dambos for marketed vegetables has become a feature of the local economy (Mazambani, 1986).

Dambos have thus had differing roles in the agricultural economy over the past century. There has been no predictable transformatory trend from extensive to intensive production; no predictable movement from grazing to agricultural use or from common property to private tenure. Investment in dambo resources has been influenced by a range of ecological, economic and political factors; control over their exploitation has been a central feature of this dynamic.

#### **Dimensions of local control over dambo use**

The control over the dambo resource for agriculture has also varied over time. Claims over these key resources have been made by lineage leaders, by 'ordinary people' under resource pressure and by the state. Each group has used differing arguments to legitimate their claims. This section will explore the historical interaction of these competing claims and the interaction of the legitimating arguments for control. These range from lineage claims of ancestral residence, to political-religious articulations of 'spirit'

ownership of the land, to arguments based on the need to produce food by the marginalised resource poor, to the state's interventions in the name of protection and conservation against environmental degradation. Competing ideologies of control over key resources result in conflicts over rights both within local communities and between locals and the state.

In the late nineteenth century, dambos were concentrated in the hands of the 'big men' who dominated the local political system. 'Chiefly' power was assumed by important polygamists who retained control over hilltop settlements and dambo resources through the support of their dependents. Settlements contained many sons or sons-in-law who were obliged to support the political authority of the 'big man' (Wilson, 1986).

This pattern decreased in importance in the early part of the century, as new lineage groups assumed power. The splitting of ruling lineages meant that political authority began to be dissipated. The in-migration of other family groups and their successful establishment, also meant that there was no possibility of total monopoly of control. However the dambo areas were still largely in the control of chiefly lineage families.

Legitimizing authority was supported by political-religious arguments. Mukamuri (1988) has argued that lineage authority is enhanced by making claims of sacredness over a wetland site. Control is exerted through ancestral lineage spirits, via autochthonous spirits or through individual's spirits. Sets of taboos and regulations are introduced that demonstrate symbolic reverence and respect to the spirit 'owners' of the land. Sacredness of a resource may be claimed by ruling or immigrant lineages in an area; competing claims of spirit control are thus central to the contesting of land use between ruling and immigrant groups.

Dambos may have different types of sacredness associated with them (Mukamuri, 1988). Sacred wells are common in dryland areas. These may be protected by a series of taboos from use by humans that would damage the water resource. In each case, symbolic guardians exist to ensure the sacredness is respected. Dambos may contain sacred pools or marshy areas which must not be tampered with. These too may be protected by water sprite guardians for the 'spirit owners' of the resource.

Wilson (1986: 7) concludes that:

"Wetland sacredness is only part of the general ownership of the environment by the ancestral spirits, who thus pass rights to the ruling lineages enabling their ritual and political dominance of the area and the (mainly immigrant) peoples. In the locals' view such unity and regulated respect for the guardian spirits is essential to a balanced and sustainable relationship with the environment and its spiritual determinants."

Influential lineages thus use the legitimating arguments of sacredness and the authority of the ancestral spirits to exert control over outsiders in competition for use of key dambo resources - notably for water use.

Lineage control has remained significant to the present. Claims made by others, whether immigrant households wanting to establish a garden, the colonial state attempting to intervene and 'conserve' an area or development agencies arriving to 'develop' the area have been opposed by political-religious arguments that support resource control being maintained by ruling lineage groups.

The 'tradition' of wetland sacredness has been recreated by some lineage groups as a mechanism to oppose threats to wetland use. This was particularly the case following the enforcement of state legislation on wetland conservation. Sacredness, previously associated with small springs at the dambo centre, was extended to cover larger areas. This has also prevented the young or landless from claiming the land for cultivation; sacredness effectively 'privatised' the dambos in the hands of the elite (Mukamuri, pers. comm.).

If outsiders do not follow the correct supplication procedures, they are seen as rejecting the controlling power of the lineage ancestors and so the authority of the ruling lineage. 'Outsiders' disrespect is often blamed for the damaging of a dambo water source. A series of examples illustrate the point (Box 1).

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**Box 1: Dimensions of local control: the role of the ancestral spirits.**

Case 1: Attempts at cultivating a small area of sacred wetland by an immigrant outsider during the drought of 1982-4 resulted in its destruction. The individual ploughed right across the area, resulting in its desiccation. Local lineage leaders were furious; its drying up was because, they argued, the ancestors were not respected. Abuse of water supplies and the ignoring of taboos concerning use is also another area where control is exerted. Threats of ancestors' recrimination (particularly the threat of drought) provides an important disincentive for potential users of the resource and a reason for retaining the wetland areas within the realm of control of important lineage leaders [Sources: fieldnotes Mototi area, Mazvihwa CA; Wilson, 1986; Mukamuri, pers comm].

Case 2: Claims on ancestral land outside the administrative boundaries of the communal areas are also made. In a commercial farm adjacent to the Serima communal area in Gutu district, there is a particularly sacred wetland area. Reports claim that this is the site where a number of the European farmer's exotic cattle have disappeared, yet the spirit guardian allows local indigenous animals (black) to make use of the resource. Such stories lend support to local claims on

land and resources in land that was designated for European occupation. However it is argued that modern change is reducing the power of the mediums and sacred places are being destroyed at an increasing rate. According to advocates, traditional controls (which prevented erosion and regulated use) are being usurped by 'modern', 'European', 'government' controls which are less effective. (Source: interview, Harare 10.87).

An elder from Chivi CA, relating environmental deterioration to political changes in resource control, put it succinctly:

"The land is dry now because of the Vidco; the wrong people are doing the supplication. The immigrants are now the leaders." (Interview, Chivi CA, 7.9.87)

Case 3: The colonial state instigated a series of conservation measures from the late 1920s to protect the dambo resource. In the 1950s and 60s a campaign of fencing off the 'sponge' areas of dambos was started. Government and NGO projects have replicated this practice since Independence. A discussion recorded in Chivi CA focuses on the desirability of introducing a fence. Two contrasting stances are observed: the first informant takes a stance informed by observations of hydrology and production benefits, the second, elder informant derives a different interpretation relating environmental protection to spirit guardianship:

- 1: "Cattle feet block the streams of water underneath..the dekete (wet area) should be protected by fencing because they keep the other places around...Fencing also provides us with grass for thatching the huts. It's a good idea."
- 2: "The wet areas should not be fenced because the njuzu [water sprite] would flee in fear of the wire.. Cattle alone cannot destroy a place, as long as the njuzu is there...Long back cattle would only move to the dambo when all the grass was finished, but they would leave the wettest place..this place is protected by the njuzu."

[Source: group interview, Gwanadomba, Chivi CA, 7.9.87]

Case 4: Water development efforts in dambo areas have come across resistance by local lineage leaders. Angry at the lack of respect paid to the lineage controllers of the resource, they have argued that the concrete used in well building would offend the ancestors and the wells would dry up. Local wisdom has it that many did. Whatever the actual 'cause', this provided further legitimation of the lineage leaders' claims over the resource. In some cases, the concrete wells were destroyed and the development agencies withdrew [Sources: Wilson, 1986; Z Phiri, pers comm].

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Local arguments are therefore often situated within a political- religious frame and have been used to oppose outsiders' claims over these key resources. However, lineage leaders have not been consistently successful in asserting

their authority over their ancestral land. Changes in local political authority over the colonial period, with fission of lineages and competing claims emerging between different segments of a chiefly lineage group have acted to dissipate the power exerted by the 'big men' of the nineteenth century. The emergent power of immigrant groups has also acted to dampen the power of any ruling lineage claim. This has become particularly apparent since Independence when authority in post-Independence structures at the village level has often shifted in favour of the younger, immigrant families and their political allies. Blame for the destruction of resources (and even for drought) has been laid on the Village development committees and other 'modern' institutions.

#### **Attempts at state control: environmental legislation**

The state has perhaps been the major competitor in the struggle for control over dambo resources. The colonial state persistently attempted to remove control of the dambo resource into its realm by pursuing a highly interventionist strategy towards natural resource management. The legitimating ideology has been one of conservation and environmental protection.

State intervention in dambo use dates from the Water Act of 1927 (amended 1976) that states (Cormack, 1972):

"No person shall conduct any operations which interfere with the bed, banks or course of a public stream or any swamps or marshes forming the source of a public stream or found along its course without permission."

Initially this had little direct effect on dambo cultivation in the reserves. Dambo agriculture continued to prosper, providing successful supplies of maize and rice in the wet season and wheat in the dry season. This produce competed successfully in the emerging markets, often outcompeting the new settler farmers.

A particular concern of colonial observers was the production of wheat on dambos. The McIllwaine report on the natural resources of the colony (1939: 25) commented on the growing of dambo wheat:

"Growing wheat on dambo land is, on the whole, economically unsound, and that when it is accompanied by the destruction of valuable dambos it becomes a tragedy.. a tragedy which may be said to be encouraged or even made possible by government subsidies."

"I would be inclined to condemn the growing of wheat in these dambos entirely. I think these dambos should be kept for grazing of stock and not ploughed at all."  
(NRB, 1942: 27; Mr Sole after a visit to Zimutu)

The general concern with dambo cultivation grew during the 1940s. A range of justifications were employed by the state to

suppress dambo cultivation. The dominant argument was framed in terms of potential environmental degradation:

"I regard the breaking up of the dambos as detrimental to the water resources of the country. If a dambo is left with its own natural covering, it becomes a marsh and it is a natural reservoir which will feed the rivers." (NRB, 1942: 33; J. W. Mossop)

Although many such statements were without technical evidence (and have since been shown to contain inaccuracies, see Part 2), the colonial authorities decided to incorporate stricter regulations of dambo use within the Natural Resources Act of 1942. With the establishment of the Department of Natural Resources and the deployment of Land Development Officers (land inspectors) the regulations could now be enforced.

The stream bank protection regulation was originally enacted in 1952 (amended in 1975) as part of the 1942 Natural Resources Act. The regulation prohibits cultivation within 100 feet (now 30m) of a streambank and on wetland. This provided further ammunition for the propagators of state led environmental protection. The regulation persists today and continues to be enforced.

Through this barrage of legislation the state, in the name of environmental conservation, had taken responsibility for the management of these 'key resources' and imposed a series of strict guidelines for use. The result was that previously productive agriculture on dambos became illegal.

Control by the state was executed (from 1942) by the Natural Resources Board (NRB). Their annual reports, from that time onwards, are full of urgent calls for more control over illegal use:

"Widespread and increasing illegal cultivation is taking place in practically all Tribal Trust Lands. It is accepted that it is practically impossible to stop this practice, but it is of utmost urgency that methods of regulation and control be implemented." (NRB Annual report, 1973: 10; emphasis added)

The first report following Independence noted:

"..large scale uncontrolled cultivation of wet areas, stream banks and even water courses." (NRB Annual report, 1980/1: 1; emphasis added)

The official stance of the NRB has remained basically unchanged to the present. However, behind these official proclamations a technical debate was going on that increasingly questioned the simplistic interpretation of the legislation. A tension between the conservationist stance of the NRB and a production oriented advocacy by other sectors of government, notably the irrigation department, is observed. This was particularly influenced by the powerful lobbying of European commercial farmers in the country.

## Research on dambo agriculture

Whitlow (1985; 1989) has documented the research debate on dambo agriculture in Zimbabwe. Early research focused on drainage mechanisms (Watt, 1912; Roberts, 1938); evening out the drainage characteristics for large scale commercial production was seen as a priority. However concern about water conservation and soil erosion, combined with the experience of poor drainage practices on European farms, introduced doubts. Concern about soil erosion in dambos dates back to the early years of the century (Watt, 1912, Haviland, 1927). Despite a lack of substantive evidence to support the contention that dambo cultivation necessarily damages soil and water resources (and growing evidence to the contrary), the question of environmental degradation has remained significant to the official research agenda to the present.

From the late 1940s research concentrated on the guidelines for 'rational use'. Rattray et al (1953) argued for a cautious approach to use, while recognising the potential value of dambo agriculture. A committee was established in 1958 by the Irrigation department under pressure from European farmers. Investigations were carried out to look at different methods of drainage and cropping system in dambos. The studies uncovered important details about dambo hydrology that undermined some of the arguments for total protection and environmental conservation.

During the 1960s, pressure grew to investigate ways of successful maize production in dambos on European commercial farms. A dambo utilisation committee was established in 1970 to investigate the potentials for maize production. Research trials were established and a preliminary assessment of the findings was reported by Grant (1974), noting the significant potentials for successful maize production on dambos, even under waterlogged conditions.

A contradiction arose - research demonstrated the potential success of sustainable dambo cultivation, yet it remained illegal. In an attempt to resolve this dilemma (a potential embarrassment for agricultural extension workers), a working party recommended that dambo cultivation should be legalised in European areas during the 1960s (Whitlow, 1989: 111).

Without the effective lobbying power of the large-scale European farming sector, peasant farmers had to remain bound by the restrictive legislation. Although some of the technical rationale for its implementation had been undermined by research, the NRB argued that 'rational use' was unlikely in the peasant farming areas and that a conservative approach that ensured environmental protection should be retained.

The technical debate over the validity of these regulations has persisted to the present, with further research demonstrating the potential sustainability of dambo agriculture (eg. Elwell and Davey, 1972; DRU, 1987; Whitlow, 1989; see Part 2). Although there are routes by which a



peasant farmer can apply for an exemption from the regulations, this still means that decisive control is left with the state rather than with the farmer. This is of course resented; not only by the lineage 'owners' of these areas, but also by others who could potentially make claims on a dambo area for productive cultivation.

Locals therefore argue strongly against the legislation. While accepting the need to manage the resource carefully, few accept that it should be removed from production. They argue from experience; having observed, successful, productive and (apparently) sustainable agriculture in the dambos over the years. Many technical specialists would support their argument; currently the law does not.

#### **4 Key resources for grazing**

Much of the debate over agricultural use is replicated in the discussions over grazing use of dambos. Similar conflicts of interest arise - both over local control of resources and over state interventions in grazing management.

The importance of dambos for grazing results in competition with agriculture. The degree of conflict between agricultural and pastoral use has varied over time. As land pressure has increased and the availability of grazing land decreased, dambos have become more important for grazing. Dambos provide critical grazing both during drought years, when top-land grazing has limited growth in the wet season, and during the dry season when the dambo areas may provide a significant contribution to fodder intake (Scoones, 1989).

#### **Historical patterns of dambo use for grazing**

During the nineteenth century the limited livestock holdings of the southern Shona probably survived off grazing in the hill zones with limited need to rely on dambo resources. The large herds of Ndebele cattle grazed the extensive sweet veld plains of the south; key resource grazing being gained from the banks of rivers. Dambos therefore could be exploited for intensive agriculture, without competition from livestock.

In the early part of the century cattle populations were rising, but were not particularly constrained by lack of fodder resources. During this period the dambos were largely left ungrazed and tall, rank grasses dominated them. Local people recall:

"Long back the dambos were not used by animals; the grass was tall and the places wet. There was plenty of grass elsewhere." (Interview, Masinire, Chivi, 18.8.87)

Today, with high levels of resource pressure in the communal lands, the dambo grazing areas provide vital fodder in the dry season. The current concentration of grazing on dambos has been affected by a combination of absolute population

increases and changes in land-use. The centralisation plan (implemented in the majority of communal areas between 1930 and 1960) moved agriculture away from the water sources (river banks, dambos etc) in the valleys to the toplands, leaving the grazing to the bottomland areas. With an expanded agricultural area on the topland, grazing has increasingly been squeezed into narrow strips along the water courses. Land-use planning interventions have thus made the dambo grazing essential to livestock survival.

In the land extensive areas of the large scale commercial ranches the dambos are not used in the same way. The low levels of grazing intensity means that the areas are barely touched and tall, poor quality grass dominate the dambo areas. However in the communal areas, with high stocking rates, regular grazing (including some in the wet season) helps to keep the grass green and relatively palatable. Informants from Runde and Mazvihwa CAs comment:

"Cattle like to come and graze in the dambos in the dry season. They get greener in August or so when the water starts to rise up. They really rely on the dambos for feeding. At this time the trees begin to shoot, so they survive very well." (Manpanzure workshop, Runde, 12.5.87)

"Dambos are now better for cattle than they were. At this time cattle survive completely on the dambos. The cattle will remain in the dambos till ploughing. They will find plenty of bulk food, but not enough good quality food to keep them strong. They will be alive though." (Mutonga dambo workshop, 25.7.87)

Increased use of dambos for grazing inevitably results in heightened competition between agriculture and livestock. But the situation is complex. In areas where dambos are still being used for agriculture, cattle can still make use of the central grass area during the dry season. In addition, the high production of crop residues and grass on field boundaries or contour bunds also can be made use of during the dry season. The impact of increased arable areas on livestock production in an agropastoral system is therefore difficult to assess. Much will depend on the degree of individual control exerted over the grass and crop residue resources on dambos (see below).

#### **Local control**

The form of local control over grazing resources in the communal areas is varied. Sets of overlapping rights exist with varying degrees of effectiveness in ensuring control over the resource.

Scoones and Wilson (1989: 98-99) comment:

"Individual homes, homestead clusters, spatially defined village sections, political villages and wider communities all have overlapping rights to any one natural resource in a specific place...[However] livestock grazing areas are frequently described as belonging to certain loosely defined communities...[but] the existence of such grazing areas does not mean that exclusive tenure is held over these pieces of land."

Not surprisingly, dambos are central to these territorial rights and property regimes. Assertion of some degree of control over dambo resources by individuals, kin based groups or looser 'communities' may be one way to secure fodder resources for cattle.

A case from Mazvihwa CA illustrates how competing demands on dambo grazing and water sources were made under the stress conditions of the 1987 drought. Attempts at managing exclusivity of the resource by lineage 'owners' had differing degrees of success (Box 2).

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#### **Box 2: Controls over dambo grazing and water sources**

Lineage and 'community' control. Certain grazing dambos in the granitic hills area of Mazvihwa CA are recognised locally as 'belonging' to a particular lineage group. Attempts at regulation of grazing use by the 'owners' of a dambo in the Mutonga area failed during the 1987 drought. In 'normal' years, the dambo was part of the territorial grazing of a number of household clusters, providing valuable fodder at critical times of year. But in the drought, the grazing there was the last available in the whole area and cattle flooded there to make use of it.

However the sacred well situated on the dambo edge was not touched. The use of this was retained for regulated human consumption (according to a series of local taboos). Cattle had to move a further 5 km to find another open dambo well that did not have the same protective regulations. This became heavily used throughout the drought by animals, making it unusable by humans. The regulation of water use had some effect on reducing the local grazing pressure, shifting it to the dambo with the open access well.

It seems therefore that local political control in this case was able to extend to the key water source of the dambo, through its symbolic sacredness and the guardianship of the lineage ancestors, but not directly to the associated grazing resource which was 'owned' by the lineage cluster, but did not have such a high level of protection.

Individual control. In some areas individuals have managed to appropriate dambo grazing for private use. This is illegal and

generally frowned upon by local people who retain a strong ethic of communal use rights. The most common mechanism for the establishment of private rights over a grazing resource is through the extension of an arable plot into the communal grazing land and then leaving the land fallow. In the case of dambo grazing this is relatively easy as legislation prevents cultivation in the dambo proper, but dambo margin cultivation is quite common. The extension of the fence boundary towards the dambo centre allows the capture of highly productive grazing, potentially for private use.

[Sources: Field notes, Mazvihwa CA 11/1987; Shurugwi CA, 4/1988]

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The effectiveness of key resource control is thus dependent on local circumstance. Common property regulation varies according to differing degrees of resource pressure and the effectiveness of local authority structures in exerting power through political-religious arguments or through the collective action of modern institutional structures, such as Vidcos. The potentials for private appropriation of key resources also varies according to local environmental and political circumstance.

The following section explores the dynamics of conflict over dambo resource control in one area in central-southern Zimbabwe. The initiation of a fenced grazing scheme highlights the contrasting views to resource management held within the community. The lack of acceptance of the externally imposed and planned scheme focusses attention on alternative, locally evolved grazing management strategies. These are centred on the management of dambo grazing.

## **5 Conflicts over grazing in Mutakwa Grazing Scheme**

Struggles over the control of dambo grazing land have played a major role in community politics in Mutakwa Grazing Scheme in Zimuto Communal Land. The lines of fracture and conflict within the scheme and between the scheme and its neighbours are complex and shifting. The difficulties involved in instituting an effective regime of collective resource management are clear, but the design of the fenced paddock scheme, which takes little account of local patterns of resource use, is creating its own problems. A potential point of conflict is between farmers and government extension staff. This case study highlights the role of dambo grazing land in these struggles over resources.

### **The Context: Zimuto Communal Land**

Zimuto Communal Land is situated some 35 kms north of Masvingo where average rainfall between 1981/82 and 1989/90 was 511.1 mm. Vegetation is of the Burkea/Terminalia type with Brachystegia spiciformis (msasa) woodland on the main crests and Julbernardia globiflora on areas with slightly heavier soils (Jordan 1964: 66). Farmers depend on a mixed crop-

livestock farming system. In Zimuto this is made possible by the large number of dambos which criss-cross the Communal Land and drain into two main rivers.

E D Alvord, the first Chief Agriculturalist in the Native Department, surveyed Zimuto in 1933. In September 1933 (ie. in the late dry season) he commented:

The good grazing, however, was largely due to the numerous dambos with young grass and the clumps of green grass and reeds along the small streams and rivers. Judging from the appearance of the cattle one would hesitate to say that the Reserve was heavily stocked... (Alvord 1933).

Zimuto has experienced one of the longest and most sustained efforts on the part of government planners to introduce "improved grazing methods". This history stretches from the 1930s to the present.

Robinson (1951) has described the first grazing schemes in some detail. The justification for introducing the schemes, without much attempt at consultation with local residents, was that the grazing areas had a "sparse grass cover" and the vegetation indicated "a worn out and overgrazed veld and soil of low fertility". The dambos were drying out and "erosion was much in evidence" (Robinson 1951: 3). The Native Agriculture Department decided to begin a major programme of "pasture improvement".

To begin with an area of 1460 hectares was fenced into four paddocks. A system of rotational grazing was adopted, paddocks being grouped in pairs and rested in January, February and March in alternate years. Pasture furrows were constructed in the dambos in order to "check erosion", and sponge areas were fenced off from livestock. Because more fencing could not be obtained other grazing areas were divided into "paddocks" by means of demarcation banks and the animals were herded within these. Hay making and silage production were carried out with the help of mechanical mowers. By 1952 the Provincial Agriculturalist reported that a total of 44,467 acres was under rotational grazing in Zimuto Reserve. Grazing rotations through the 1950s and early 1960s continued to be of the two paddock/deferred grazing type (Jordan 1964: 62).

The abandonment of the Land Husbandry Act in the early 1960s was followed by the return of land allocation powers to the chiefs and the promotion of "community development" in the late 1960s and early 1970s (Passmore 1972; Cousins 1987). Froude (1974) describes the efforts made by extension staff in Victoria (now Masvingo) Province to promote multi-paddock Short Duration Grazing schemes from 1968 onwards. Some of these schemes in Zimuto were fenced.

From the mid-1970s onwards almost all grazing schemes ceased to operate due to the increasingly bitter guerilla war being waged in the Zimbabwean countryside and the breakdown of government and "traditional" authority that this entailed.

Zimuto was no exception, and local residents remember the disappearance of fencing materials from grazing areas.

The boundaries between grazing lands continued to exist, however, marked by means of beacons or gum trees, on old Land Husbandry maps held by extension staff, and in people's minds. After independence in 1980 extension staff revived the notion of Short Duration Grazing schemes, promoted them widely within the District, and disinterred some of the plans which had been drawn up in the course of the previous decades. Donor agencies began to make funding available for the purchase of fencing materials.

The European Economic Community (EEC) was particularly active in this programme, and funded the fencing of four "revived" schemes in Zimuto in 1986 (Cousins 1988). Since then other donors have contributed materials to communities in Zimuto, and the District Administrator's office has donated wire and poles as part of the District's public works programme. In some instances people have been paid under the government's "Food-for-Work" programme to erect fences in their own grazing lands. By 1989 approximately a dozen fenced schemes were in operation or being established, and extension staff claimed that a number of old unfenced schemes had begun to operate again. Today this Communal Land contains one of the largest concentrations of grazing schemes in the country.

Although these schemes tend to contain both dambo land and topland, it is the former which is crucial for forage production. The following case study of one such scheme shows how it is the dambos which are the main focus of conflicts within and between communities, although the fencing of low productivity topland creates problems of its own.

#### **Socio-economic structure in Mutakwa Grazing Scheme**

The community of Mutakwa comprises two villages which have a common origin and a long history of shared resource use. The present population is approximately 662, including household members working in urban or other locations. Nhanvza "kraal" contains 62 households and Tirivanhu another 42, a total of 104 households. Surveys carried out in September and December 1988 collected data from 99 and 43 of these households.

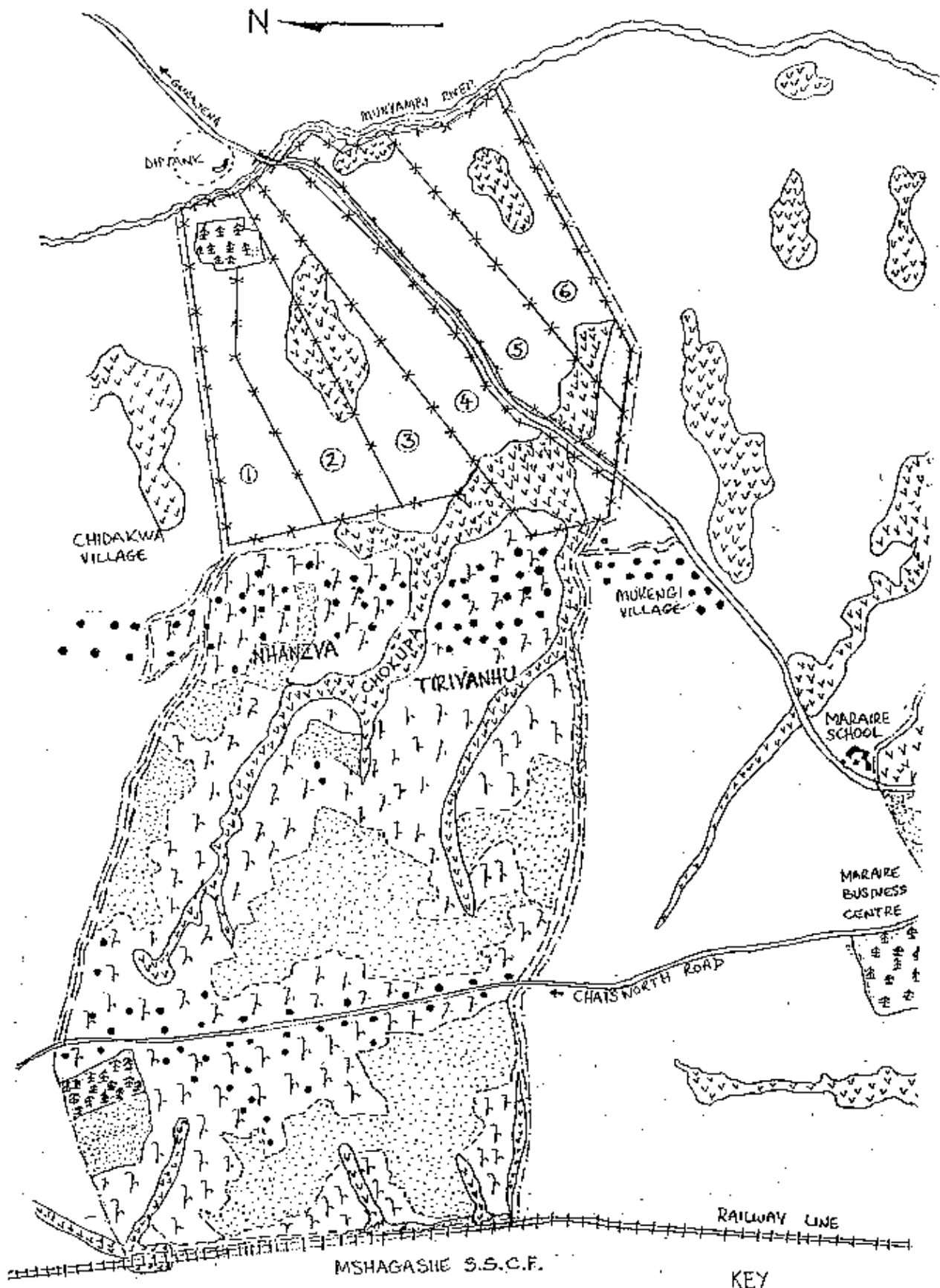
Figure 2 shows land use in Mutakwa. Arable fields are located on the crests rather than lowlying areas, but many are also found on the margins of the dambos which drain into the rivers and small streams. There is a growing land shortage in Mutakwa, under pressure from young families from within the community, as well as outsiders seeking land to settle on.

Although the distribution of arable land is not highly skewed within the community, the same cannot be said for grain production or for crop sales. Of the 520 bags of maize sold in 1988, 57% came from only 11 households, and 35 percent came from the top four sellers. Figures for total grain production show a similar pattern.

The distribution of cattle is highly skewed, 42 households own none, and only 15 own more than ten. The large herd owners own 45% of all the cattle in Mutakwa. Only 6 head of cattle were sold in 1987/88 in Mutakwa, and four of the five households involved were large herd owners.

Over 60% of households have members engaged in wage labour. Many of these work in nearby Masvingo, and the vast majority visit their homes at least once a month. Local non-agricultural income-earning activities such as building, brick making, sewing and knitting are also important; 67 households have members engaged in a range of these. Few households depend on agriculture alone. The most significant index of socio-economic differentiation in Mutakwa appears to be cattle ownership, which is strongly associated with successful crop production.

Figure 2: Land use in Mutakwa grazing scheme



MUTAKWA GRAZING SCHEME  
ZIMUTO COMMUNAL LAND

SCALE : 0 500m 1000m

KEY

TRACKS	=====
ROADS	—————
FENCING	* * * * *
RIVERS	~~~~~
GRAZING AREAS	① ② ③ ④ ⑤ ⑥
SCHOOLS, SHOPS, OFFICES	■
HOMESTEADS	•
VLELAREAS	~~~~~
BOUNDARY OF SCHEME	—————
WOODLOT	▲▲▲▲
REVERTED ARABLE	•••••



### **A brief history of Mutakwa Grazing Scheme**

The two villages within Mutakwa are each under their own kraalhead or sabhuku and were formed as separate entities in the 1930s or 1940s.

Older residents remember the first paddocks as having been introduced to Mutakwa in 1959 although some sort of deferred grazing system was possibly in force during the 1940s. They were initiated by the Agricultural Demonstrator, who did not consult with villagers but "simply told people what to do". There were two paddocks to begin with, which were rested in alternate years, between January and March. The toplands were not used much by the animals, since they didn't contain much in the way of grass. According to one informant, "cattle always used the dambos because they were fertile", and another states that "tall grass was found in the dambos only".

The present-day sabhuku of Nhanzva, Chitime, says that people were not happy with the grazing area demarcations made at that time since they were cut off from the dambo grazing in the neighbouring Chidakwa village area. Although they were forced to follow the demarcations when herding their livestock, he and others defied the regulations and put their cattle onto the Chidakwa dambos; they were then forced to pay a fine.

Fencing made its first appearance in late 1960s and in the early 1970s money was collected from each family and a boundary fence was erected along two sides of the grazing area, "to keep out the neighbours' cattle".

After independence the idea of reviving the grazing scheme came from extension officials; initial discussions were held in 1985, and a committee was elected. The EEC donors provided fencing materials and the community was expected to provide some labour materials and cash. Planners retrieved the 1970s paddock design from their files and replicated it with a few modifications. Fencing was completed in 1987, and the paddocks were first used in the 1987/88 season.

A standard set of grazing scheme by-laws, drawn up by Agritex (the government extension service), was signed by the committee as a precondition for receiving EEC assistance including by-laws referring to the setting of maximum stocking rates.

An alternative set of loosely formulated rules agreed at a community meeting are more widely, if unevenly, known. These refer to the use of the correct paddock in the rotation, the prohibition of fence cutting, controlled tree felling, a prohibition on the collection of leaf humus from the paddocks, and the paying of a fine of 50c for absenteeism from work sessions.

In this brief history of Mutakwa Grazing Scheme the following lines of potential conflict can be identified:

- between those within the community who agree with paddocking and are committed to it, and those who do not;
- between those who worked on erecting fences and those who did not (these first two cases overlapping to a certain extent);
- between the Committee and those community members who do not comply with agreed by-laws;
- between Mutakwa and its neighbours in Chidakwa and Mukengi;
- between members of the grazing scheme, who are generally opposed to regulation of stock numbers, and government staff and donor agencies, who consider it essential.

The following sections will explore those aspects of these conflicts that are centred on the use of dambo resources and the management of the grazing scheme.

#### Habitat patch use in Mutakwa

Land use and habitat patches in Mutakwa Grazing Scheme are shown in Figure 2 and Table 1. The stocking rate for the paddocks alone is 0.85 ha/LU, and for the area as a whole 2.35 ha/LU. This compares to Agritex's recommended stocking rates for the region of 5-8 ha/LU.

Half of the total area of dambo land is found within the paddocks - some 35 ha. This comprises 14.8 % of the total area which is fenced. Most of the wooded toplands fall within the paddocks, and comprise 81.5 % of the fenced area.

Table 1. Habitat patches within Mutakwa grazing scheme in different seasons

	Wet season		Dry season	
	ha	%	ha	%
Reverted arable	123.4	29.1	123.4	19.3
Fields	0	0	178.5	27.9
Contours	0	0	12.0	0.9
Toplands	198.4	46.7	198.4	31.0
Dambos and drainage lines	68.8	16.2	68.8	10.7
Home sites	24.8	5.8	49.5	7.7
Riverine	9.4	2.2	9.4	1.5
<b>Total</b>	<b>424.8</b>		<b>640.0</b>	

Habitat patch use by foraging livestock was investigated between January and December 1989. The method used to assess habitat use was basically the same as that used in another area in southern Zimbabwe (Scoones 1989, 1990). Two herds of cattle located in the east and west of Mutakwa respectively were followed for a full day each month, noting the location and foraging activity of the herd at half hour intervals. Herding of these herds was sporadic throughout the year, since cattle were enclosed in paddocks during some of the growing season, and were sometimes herded into definite locations even during the dry season.

The two herds displayed broadly similar foraging behaviour across the seasons, but there were a number of differences as well. These arise mainly because of the different locations of the home kraals of the herds. The herd from the west of Mutakwa, located across the Chatsworth road, hardly used the paddocks at all, and only in the late dry season. The bulk of grazing was done in the small dambos which abut onto the railway line in the narrow strip of toplands along the railway line, and in the reverted arable in the west. In the early dry season the harvested fields were heavily utilised.

The herd from the east of Mutakwa used the fenced paddocks to a much greater extent, but even in the cropping season for only 34.2 % of the total feeding time. In the early dry season and late dry season paddocks were used for 17.3 % and 27.3 % of total feeding time respectively. The community herd as a whole was never observed to be all using the same paddock simultaneously, and there was no regular rotation practised. The dominant pattern throughout the year, but most markedly during the cropping season, was for livestock to be taken to the paddocks only during the afternoon, and left there until evening. During the mornings small co-operative herding groups herded animals in other habitat patches. One rationale for this was that the smaller individual herds could be taken into small drainage areas or pieces of reverted arable more easily, with less danger of damage to crops.

Using combined data for the two herds, the use of the habitat patches in three different seasons (cropping, early dry and late dry) was estimated by calculating the percentage of feeding time spent in each type of habitat. The results are shown in Table 2.

Table 2. Seasonal habitat patch use in Mutakwa, 1989  
(expressed as a percentage of total feeding time)

Cropping	Early dry	Late dry	
Fields	0	27.2	5.0
Reverted arable	28.8	12.1	3.0
Contours	0	18.8	4.4
Home sites	10.2	10.0	17.5
Toplands	17.5	12.3	18.0
Dambos and drainage lines	39.1	19.6	39.3
Riverine	4.4	0	12.8

Table 2 reveals that dambo grazing is critically important during the cropping and late dry seasons. Fields and contours assume great importance in the early dry season. The riverine habitat, and home sites (where cattle are fed with stored crop residues), play a major role in sustaining livestock during the late dry season. Resource use is "patchy"; heterogeneous in both space and time. Some grazing habitats are more important than others, and those that keep animals alive through the late dry season are perhaps the key to understanding how such high stocking rates are maintained despite the predictions of conventional wisdom (Scoones 1987; 1990).

The large proportion of time spent in the reverted arable in the cropping season partly reflects the relative scarcity of dambo grazing for the herd from the west of Mutakwa and partly the shortage of grazing land for the community as a whole. The low figures for topland grazing reflects how little time was spent in the fenced paddocks, but also the low preference for this habitat in general. This pattern is highlighted by calculating the preference index for habitat types. These are shown in Table 3.

Table 3. Foraging preference index, Mutakwa 1989

Cropping	Early dry	Late dry	
Reverted arable	0.99	0.63	0.16
Fields	-	0.97	0.18
Contours	-	9.89	2.3
Home sites	1.76	1.30	2.27
Toplands	0.37	0.40	0.58
Dambos and drainage lines	2.41	1.83	3.67
Riverine	2.0	0	8.53

### **"Key resource" management in Mutakwa**

Another local resource management strategy is the closure of the upper portion of Chokupa dambo for a period of time in late summer. The actual timing of the closure depends on rainfall. According to informants, this practice of deferring grazing on a highly productive dambo area during the late summer months has been a feature of life in Mutakwa for many years. Its origins are probably the earliest deferred grazing systems introduced into Zimuto in the 1940s. However this management practice is unacknowledged by technical experts and is outside the grazing schemes being supported by donor money. It is a local management strategy that coincides with local understanding of range management.

It is interesting to note that this deferred grazing system operates with a fair degree of effectiveness, even though no fencing is involved. One factor in the relative effectiveness of this exclusion rule may be the highly visible location of the dambo, sandwiched between fields and homesteads (see Figure 2). Another may simply be acceptance won through many years of habitual practice. However, the habitat patch use data demonstrates how important dambo grazing is in Mutakwa, and we suggest that the practice denotes a common property management regime aimed at spreading the availability of scarce grazing resources across seasons. In this view the rule is rooted in a rational management strategy, and is effective mainly because its rationality is understood and accepted within the group of co-users.

### **"People do understand the paddocks but some don't listen": internal struggles and the crisis of authority within Mutakwa**

The practice of reserving grazing in Chokupa dambo has, in recent years, been the site of a struggle over decision making powers within Mutakwa. Two alternative proponents of grazing management exist in Mutakwa. First, the grazing scheme committee (supported by government extension agents and donor money) advocate fenced, rotational paddock grazing, heavily reliant on dryland resources. Secondly, others, notably the sabhuku Chitime, advocate deferred grazing, reliant particularly on dambo resources.

The available evidence indicates that upkeep of the fenced paddocks have a low priority for most members of Mutakwa, despite their widely recognised usefulness for relieving herding labour. Given the analysis of cattle foraging behaviour, which points to the central importance of dambo grazing, (including significant portions outside the paddocks, and some of which is located at the most distant point from the paddocks to the west of the community), this is not surprising. The greater degree of commitment to paddock maintenance by households who live nearby to them also begins to make sense. Paddocks, then, are not viewed within Mutakwa primarily as a means to manage grazing; they are first and foremost seen as an aid to livestock herding and the organisation of household labour. This conclusion is further

reinforced when we examine the desultory attempts by the Committee to institute a system of rotational grazing within the paddocks.

While internal disagreements have threatened co-operation within Mutakwa, to what extent have conflicts with neighbouring villages over dambo grazing served to unite the community against an external threat? In comparison to the internal conflicts within Mutakwa, however, the disputes with neighbours in Chidakwa and Mukengi have not figured much in community discourse.

Thus the evidence that conflicts with neighbours have stimulated significant feelings of community solidarity in Mutakwa is limited, and the only voices articulating these disputes have been those of committee members and masabhuku. Certainly the potential threat to community resources from outsiders has not been sufficient to submerge the intense inner conflicts.

#### **Contested terrains: structures of authority and decision making**

At the root of the failure to achieve effective authority, however, is a local perception of ecological reality and appropriate management strategies. The fenced paddocks are not perceived by cattle owners in Mutakwa as very useful in terms of managing access to scarce dambo grazing resources; rather, they are a way to reduce herding labour during the summer months, and as a result are most useful to those whose homes are nearby the paddocks. These tensions have divided the community and made the task of developing a common approach to the use of paddocks even more difficult. The deferred grazing system on Chokupa dambo, however, does have legitimacy, and Chitime appears to be capitalising on this to reinforce his authority as a sabhuku.

The two main sources of authority in Mutakwa are the masabhuku, a "traditional" leadership based on the recognised claims of ruling lineages, and "development-oriented" bodies such as the Grazing Scheme Committee and the committee of the local farmer's club, whose members are elected. In some communities there is a degree of overlap between these two, but this is not the case in Mutakwa. Rather, the problems associated with managing a conventional, paddocked grazing scheme has been the occasion of a power play by one sabhuku in order to regain authority over the use of dambo grazing land outside the paddocks, at the expense of the Committee.

Which of the characteristics of the Grazing Scheme Committee is the most salient for understanding their role in local political dynamics? The most relevant characteristic of Committee members appears to be a combination of their larger than average cattle holdings and, given the location of their homes, their interest in use of the paddocks for reduction of herding time. In addition, the fact that they are locally resident means they are able to undertake duties such as the organisation of work sessions.

The committee is well served by the grazing scheme as an aid to herding. Their legitimacy is served by their association with government agencies and donors. For this reason, they must be compliant with the promotion of 'correct technical' awareness such as rotational management. These alliances distance them from the proponents of a more 'traditional' approach to grazing land management, involving the deferred use of key resource dambo patches.

This case study has focused on the disjuncture between the design of a conventional fenced grazing scheme and the critical role played by dambo grazing in the common property management regime which has evolved in one rural community. An inappropriate technology has fostered intra-community tensions, and helped make decision making over dambo grazing a site of fierce contestation over structures of local authority. The emergence of effective common property institutions based on an elected and accountable representative body, rather than inherited power, has thus been made much more difficult.

## **5 Conclusion**

Key resource dambo patches are, because of their potential value to rural livelihoods, central to both internal conflicts over resource use within communities and between locals and the state. A discourse based on an ideology of conservation and environmental protection propagated by the state competes with a discourse centred on lineage and ancestral resource control propagated by local lineage leaders. In parallel, a technical debate rages where local and official views again lack common ground, each resting different emphases on the dangers of exploitation through agriculture or grazing and appropriateness of different interventions.

Under conditions of high resource pressure found in the communal lands of Zimbabwe, the dambo areas are vital. It is not surprising that they are the centre for many resources access and control conflicts. Recognition of their importance and acknowledgement of their central role in resource conflict provides a basis for seeking effective solutions. Support for locally designed models of agricultural development and grazing management, that enhance the 'key resource' function of dambo areas, needs to be a priority area. Similarly, resolution of conflicts based on local management and political organisation is essential.

## **Acknowledgements**

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## **IIED'S DRYLANDS PROGRAMME**

**The Drylands Programme at IIED was established in 1988 to promote sustainable rural development in Africa's arid and semi-arid regions. The Programme acts as a centre for research, information exchange and support to people and institutions working in dryland Africa.**

**The main fields of activity are:**

- **Networking between researchers, local organisations, development agents and policy makers. Networks help exchange ideas, information and techniques for longer term solutions for Africa's arid lands.**
- **Support to local organisations and researchers to encourage sharing of experience and ideas, capacity building and establishing collaborative links.**
- **Action-oriented research in the practice and policy of sustainable development in Africa's drylands, focusing on the variability of resources and incomes on which populations depend, development-oriented research methodologies, and natural resource management systems.**

The logo for the International Institute for Environment and Development (IIED) consists of the letters 'IIED' in a large, bold, serif font. The letters are white and set against a solid black rectangular background.

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