No. 2

Supporting Local Initiatives in Woodland Regeneration

A case study from Ntabazinduna communal land, Zimbabwe

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International Institute for Environment and Development

Preface

Old alliances and new collaborations for local forest management

Today more than ever, government foresters need to pursue policies and create institutions which can control predatory loggers and secure the intergenerational public interest in some form of national forest estate. But they also need to abandon the pretence that they can do everything else besides. Relationships between people who live with trees and foresters who have formal responsibility to look after those trees have always been uneasy. Foresters in many places are now having to re-think their roles in the face of public hostility and disappearing forests. Increasingly they are looking to become supporters of forest management by local people.

The first five papers in this Forest Participation Series[1] illustrate the range of relationships emerging between government foresters and initiatives for community-based forest management. Some of these are entirely local initiatives which have been responded to by foresters. Others are efforts led by forest departments to initiate change and meet local needs. The case studies describe the origins and effectiveness of these initiatives. In all cases a parallel story is told of how the forestry institutions have themselves adapted to changing circumstances and needs.

Mary Owusu Agyemang (paper no. 1) describes how the **Ghana** Forestry Department has acknowledged and overcome the distrust of villagers in the management of non-timber forest products (NTFPs). As in many places, NTFPs are extremely important for people living near forests in Ghana. Yet travel to distant forestry offices to pay for the required permit for collecting wrapping leaves was an unacceptable burden for the women around one forest reserve. Fears that a free permit experiment, introduced by some innovative Forestry Department staff, would lead to all kinds of unlawful activities proved unfounded. The leaf gathering women organised efficiently and protected gathering sites from fires and weeds. The author also describes the way in which the Forestry Department has adapted its ways of working through experiments like this, spearheaded by a Collaborative Forest Management Unit.

Jeanette Clarke, Saiti Makuku, Philip Mukwenhu and **Josephine Ncube** (paper no. 2) describe woodland management initiatives that have developed in a communal area in **Zimbabwe.** It is argued that government woodlot programmes have been largely unsuccessful and fail to address the real resource needs of communities. It is in this context that local communities have evolved their own changing woodland management strategies. These practices are entirely local in their origin, usually developed first by individuals who then lead by example and demonstration to others. Participatory research methods were used in the study and the authors discuss how an emphasis on both methodology and

[1] Paper nos. 1 to 4 stem from presentations made to the forestry session of 'In Local Hands': an international conference on community based sustainable development, held at the University of Sussex, Brighton, UK, from 4-8 July 1994. The forestry session was facilitated by Dr Gill Shepherd of ODI, and the conference was hosted by IIED.

findings allows a greater understanding of how to document, promote and build on existing resource management practices at local level. The early stages of cooperation with these locally-derived practices by government forest extension staff is also described.

Minkesh Paul Sood's paper (no. 3) is written from the viewpoint of an "enlightened" forest officer in **Himachal Pradesh** state in **India.** He describes change initiated by certain sections at "the top" of the state Forest Department in response to lessons learned from the past 50 years of attempts to resolve its conflicting roles of extension and policing. Sood describes the careful state level preparation for adoption of the Joint Forest Management approach first outlined by the federal government in 1990. An intriguing picture is painted of a Forest Department grappling with the challenges of institutional reorientation towards collaboration with communities. Slow and sporadic progress is being made in training foresters in relevant skills, and there has clearly been an attempt to institutionalise a system for communication, feedback and information sharing in an otherwise strongly regimented forest service. Forest Departments are far from being monolithic entities. Sood's paper highlights the existence of a range of perspectives and enthusiasms at various levels of the Forest Department and the very real structural impediments - low pay, heavy workloads etc - to adopting new ways.

Madhu Sarin and her colleagues in **SARTHI** (paper no. 4), an NGO, describe locally-derived initiatives in **Gujarat** state, **India,** in response to forest resource scarcities. Across a wide area, a diverse range of organisational forms and access controls have emerged, with group membership consisting of actual resource users irrespective of formal administrative village boundaries. The strength and effectiveness of the groups lies in consensus based, open decision-making with equitable sharing of costs and benefits among all members. Their major weakness lies in the exclusion of women from their functioning resulting in women's needs for forest produce, particularly woodfuel, being overlooked in forest management priorities. This results in highly inequitable distribution of the opportunity costs of protection between women and men, and puts in doubt the long term sustainability of their forest regeneration.

This case study is more one of collaborative management *despite* the state, rather than *with* the state. The authors argue that whilst Forestry Department field staff look with pleasure at the "wave in favour of forest protection (sweeping) across villages in the area", villagers do not recognise the Forestry Department. Villagers "do not want to fell their regenerated forests ever again", since the memory of previous large-scale felling during periods of resource scarcity is too strong. And whilst the Joint Forest Management (JFM) approach demands the sharing of benefits - the villagers do not want to share with the Forestry Department at all. The village forestry groups want the right to organise themselves as they see fit, and authority to honour their responsibilities. The challenge for the Forestry Department is clear: to become responsive to locally-initiated forest management by developing powers of facilitation rather than direction.

Calvin Nhira and **Frank Matose** (paper no. 5) develop an analysis of the JFM

approach in India in relation to current and potential "resource-sharing" initiatives in forest reserves in Zimbabwe. Whilst noting major differences in forestry context between the two countries, they point to a number of lessons for Zimbabwe which have been learned the hard way in India. They discuss the influence of policy, the roles of local institutions and mediating NGOs, and the incentives for local involvement. Whilst compared to some places in India the economic interest of local people in reserved woodlands in Zimbabwe may not be high, the subsistence benefits derived may be crucial for poor households. Thus far the Zimbabwe resource sharing scheme has been premised on the state's need to improve forest protection. The authors conclude that a re-orientation is required towards greater community control through negotiation of rights and responsibilities of communities, the state and local institutions. An adaptive management approach is the key - with ways to monitor and learn from experience.

Each of the papers in this series will be of interest to field practitioners of local forest management because they contain details of the steps taken, their successes and failures. Diversity is celebrated here; it is not the intention to derive generalisable lessons. However, certain themes stand out:

- indigenous managers exist, with rules and practices well attuned to local conditions, but they have suffered from a history of state denial of their abilities

- forest departments are changing; some seeing local management as merely a cheap option in hard-pressed times, others seeking a genuine alternative to ineffective forest protection and resource theft

- both costs and benefits need to be internalised; often the costs of management are internalised within a community, but the benefits are enjoyed elsewhere, ie. if communities are protecting, they should receive genuine incentives (products, guaranteed access to resources or compensation)

- evolutionary not blueprint approaches are needed; recognizing the diversity and complexity of local context, and the importance of exploration and learning

- belief and recognition of ownership of the resource for those expected to manage it is fundamental; local management requires local involvement in decision making, and local institutions providing its authority

- specific consideration of equity amongst participants is needed

- given the above, collaborative management is difficult to bring about, and will clearly not work everywhere; care should be taken not to over-sell its potential where there is little motivation or capacity for its delivery.

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Note on authors:

At the time of the study, Jeanette Clarke and Salti Makuku were both Research Officers with the Forestry Commission. Josephine Ncube and Philip Mukwenhu were Forestry Extension Officers responsible for Ntabazinduna.

Other titles in this series are:

No. 1
The Leaf Gatherers of Kwapanin, Ghana
Mary M.O. Agyemang

No. 3
New Forestry Initiatives in Himachal Pradesh
Minkesh Paul Sood

No. 4
The View from the Ground: Community Perspectives on Joint Forest Management in Gujarat, India
Madhu Sarin and SARTHI

No. 5
Joint Forest Management and Resource Sharing: Lessons from India for Zimbabwe
Calvin Nhira and Frank Matose

Introduction

Ntabazinduna is a small communal area[1] 40 km north east of Bulawayo, in Zimbabwe. There are three wards in Ntabazinduna, named the South, North and West Wards. Each has an elected councillor. The area has a mean annual rainfall ranging between 450 and 550mm, at an altitude of between 1300 and 1500 m. The terrain is flat with gentle undulations. Most of Ntabazinduna is covered by red-brown sandy loams (*isibomvu*), interspersed with black clays (*isidaga*) in the valleys. The natural vegetation found on these soils is acacia open woodland, dominated by *Acacia karroo (isinga)*, which occurs in association with other species, particularly *A. robusta (mgamanzi), A. nilotica (isanqawe), A. rehmanniana (iphucula)* and *Zyziphus mucronata (umphafa)* (Timberlake *et al*, 1993). Pure stands of *Euclea divinorum (umtshekesane)* are found in low-lying areas and generally associated with termite mounds.

Deforestation and degradation of the communal grazing areas has led to hardships for the people of Ntabazinduna. Woodland resources within grazing areas provide essential inputs to the local farming systems and household livelihoods of communal land farmers (Bradley and Dewees, 1993). Of primary importance is the grazing resource for livestock. The forage productivity of the grazing areas is much reduced as a result of excessive pressure on both woody and herbaceous components. In addition, the grazing area woodlands are a source of fuelwood, poles, fruits and a host of other important subsistence products. These products are no longer available in quantities adequate to sustain household needs, and families are forced to travel long distances to find them, or to buy them if they can afford to.

From as far back as the 1930s, development agencies have introduced a variety of technical interventions aimed at addressing the problems of woodland clearance and land degradation. These have centred around establishment of grazing schemes and eucalypt woodlots. In recent years, innovative community self-help initiatives aimed at rehabilitation of the degraded woodlands have started to spread throughout Ntabazinduna. A number of families have groves of regenerated acacia trees near to their homes, as a result of pruning and protecting acacia scrub. More recently, this practice has been taken up by village groups who have begun to manage regrowth within grazing areas. These efforts have resulted in both increased woody biomass and pasture improvement.

A study of local woodland management initiatives and of performance of eucalypt woodlots in Ntabazinduna was conducted by researchers and extension staff from the Forestry Commission. This is one of two papers that have been written about the study. The other paper (Clarke and Crockford, 1994) evaluates eucalypt woodlots and woodland management practices in Ntabazinduna, examining input costs, productivity and values to the

[1] Communal areas, formerly Tribal Trust Lands, cover over 40% of the land and are based on a usufruct tenure system. The land is state owned.

community of each intervention. It concludes that eucalyptus woodlots are uneconomic on the loamy soils which cover most of Ntabazinduna, as input costs far exceed returns. In contrast, community initiatives to manage acacia regrowth cost less, are more productive and produce a much wider range of products and services than woodlots grown in the same area. These findings underscore the need for social forestry research and extension to focus on ways to support existing initiatives in woodland management, rather than on the introduction of narrow technical packages.

In this paper, we describe woodland management initiatives in Ntabazinduna and discuss the factors which have contributed to their success. In addition, we describe the participatory research methods which were used in the study and discuss how such methods can be used both to document and support community initiatives. Thus, there is a dual emphasis on methodology and findings of the study, as both contribute to a greater understanding of how to promote and build on existing resource management practices at the local level.

Methodological Overview of the Study

The information in this paper is taken from an ongoing programme of applied research into effective ways of supporting and building upon existing forestry practices in Zimbabwean communal lands. Methods and approaches falling under the umbrella of Participatory Rural Appraisal (PRA) are being used and further developed in this work. PRA is gaining worldwide prominence as an effective means to involve local communities in the development process, both as informants and as co-planners (Chambers, 1992). PRA methods are a powerful means of extracting information from local people, as well as providing opportunities for information sharing, reflection and planning by the participants. Through the use of PRA methods to study existing forestry initiatives, three objectives are met concurrently:

- Documentation and analysis of existing practices;
- Practical steps to support and build on existing practices;
- Development of approaches and methodologies for the above.

These three objectives are embedded in the methodology and results of the study as reported in this paper, and explain the emphasis on both methodology and findings.

Information about the history of the area and woodland management initiatives was obtained using a sequence of PRA methods. The Forestry Extension Officers for the area underwent a PRA training course and were involved in planning and implementation of each of the steps alongside the researchers. A series of complementary PRA methods was used in order to build up and cross check information. The particular methods used and their sequencing must be planned very carefully in order to match them to the information required. The sequence of

PRA methods used for this study is summarised below.

1. Key-informant interviews

We began by interviewing two people who have been instrumental in launching the community-based woodland management projects; Mr Maviva, ex-councillor of the North Ward, and Mr Mathe, who is the present councillor of the West Ward. They provided an overview of the history of Ntabazinduna, as well as of deforestation, woodlots, grazing schemes and the woodland management initiatives. They constructed a *historical time-line* to show this information. The information provided was cross checked during subsequent meetings with other informants.

2. Group discussions and mapping

We met with village groups who have begun to protect and manage portions of the village grazing area woodlands. The group meetings began with mapping of the village area, showing the location of woodland management projects. The groups drew large, detailed maps on the ground, using stones and branches to show homes and trees. The maps served as a focal point for discussion and questioning about the community projects, as well as an opportunity for the group to reflect upon and plan further phases of their projects. The maps were also used to identify families who are managing groves adjacent to their homes.

3. Visits to community woodland management efforts

After the mapping, the groups took us to visit the sites where they have begun to protect the indigenous tree regrowth, and pointed out all the different species found growing there. Pruning methods and tools were discussed, with input from the Forestry Extension Officer, who agreed to provide the groups with better pruning tools. After the visit a *matrix* was developed exploring the relative abundance and importance of all the major species occurring in the woodlands. This was used as a starting point for a discussion on the need for and feasibility of enrichment planting.

4. Visits to household projects

A sample of households who have protected and managed regrowth around their homes were visited and interviewed about their projects, using a check-list of questions. The informants were asked to list and rank the products and services they obtain from these protected groves. Measurement plots were set up to record species, mean height and basal diameters of the regrowth, as well as the management practices within family groves (results are given in Clarke and Crockford, 1994).

5. Secondary information

Information obtained through discussions and interviews with councillors and villagers in Ntabazinduna was cross-checked against written records where possible.

Study Findings

A historical overview of Ntabazinduna

The history of Ntabazinduna communal land was shaped by the land tenure and land use policies of the colonial government. Ntabazinduna reserve[2] was created to accommodate Africans who were evicted to make way for the establishment and growth of Bulawayo town, as well as those evicted from land designated as white farm land. Between 1920 and 1965 there were successive waves of settlement, which resulted in a high population density. This was part of a deliberate strategy to provide a close and abundant source of cheap labour for Bulawayo town. To this day, the majority of men in Ntabazinduna work in and around Bulawayo in order to supplement the family income generated through small-scale agriculture and livestock rearing. Some of the important historical events which have shaped the present day Ntabazinduna appear in Table 1. Information is also given on technical interventions aimed at increasing the supply of grazing and firewood.

Over the past twenty to thirty years, the original acacia woodlands of Ntabazinduna have been transformed into a low thorny scrub land, as a result of the combined effect of tree cutting and heavy grazing pressure. The overall result is a reduction in tree and grass cover, which has led to shortages of grazing, fuelwood and building poles. It is in response to these problems that individual and village based efforts to protect regrowth and rehabilitate grazing areas have begun to spread throughout Ntabazinduna.

Individual initiatives to manage woodlands

The practice of protecting and managing indigenous trees adjacent to the home is an old one in Ntabazinduna. Twenty to thirty years ago, before deforestation became as severe as it is today, each family kept a grove of indigenous trees alongside the cattle kraal, behind the house. These trees provided an emergency source of poles for repairing a broken cattle kraal, should this be necessary in the middle of the night when one would not be able to go far off to cut poles. In addition the trees provided shade and fodder for the livestock and shelter from winds for the homestead, as well as a source of firewood. It was commonly accepted that families have certain rights over the land adjacent to their homestead plot, where future generations may build their homes. Protecting trees in these areas is one way of registering a claim to the land.

During the 1960s and 1970s, more and more of these groves were cut down, leaving stunted acacia bushes and bare ground. But in recent years there has been a revival of this practice, as people have become increasingly concerned

[2] One of the state-managed forest reserves which make up about 2.5% of the land.

about the lack of trees near to their homes. Some families began to protect the regrowth from cutting, to allow the trees to grow back. By thinning and pruning the bushes, growth and productivity of trees and grass is improved. Our informants identified twelve families in their Wards who have protected trees around their homes.

An important reason for managing regrowth is aesthetic, stemming from an appreciation of trees, and concern over the "bareness" of the area. All informants said they considered the services and products derived from the woodland as secondary to their primary concern to "revive our natural trees, and return Ntabazinduna to what it used to be". A common concern is to be able to bring children up amongst the natural trees, so that they would grow up knowing about

Table 1: **Historical Time Line** (Information supplied by Mr Maviva and Cllr Mathe)

Date	Historical events
1920s	First wave of settlers arrived. They had been evicted from Mhlambabaloyi in the Mguza area, to make way for expansion of Bulawayo town.
1938	Second wave of settlers, people evicted from the site of the present-day Mbizo barracks. The base was established to train soldiers to reinforce the British army at the start of World War II. Beginnings of deforestation, as Ntabazinduna began to supply fuelwood for the army base.
1940s	People lived in scattered settlements, very little development took place aside from building of the David Livingstone mission school. The school provided a further market for fuelwood.
1944	The first block (7.5 acres) of the Ntabazinduna plantation was established, by the people of Ntabazinduna under the leadership of Chief Ndiweni.
1951	Native Land Husbandry Act.
1953-56	Implementation of Land Husbandry Act: rebuilding houses in "lines", consolidation of arable, first paddocks and grazing schemes, destocking.
1960s	Third wave of settlers, people evicted from surrounding white commercial farms.
1965-	Widespread deforestation as a result of high population density (clearing for arable lands and settlement) and fuelwood sales to Bulawayo. Early individual woodland management initiatives, arising from concern over "the bareness of the area".
1970s	Liberation war years. Further tree cutting ordered to remove cover for the guerrillas.
1980	Independence
1980s	Piped water provided to villages. Campaigns for resettlement mounted by people of Ntabazinduna and Chief Kaiisa Ndiweni, with no result. Deforestation worsens. Afforestation programmes promoting eucalyptus woodlots intensify but results are very poor. Individuals who are concerned by the bareness of the landscape follow the example of Mr Maviva and others, and begin to protect regrowth of the trees around their homes.
1991/92	Severe drought year. Community-based woodland management initiatives launched when villagers in West and North Wards vote to include acacia pruning as one of their "Food for Work" projects.

their uses and values. Case studies of three of the families who are engaged in protecting and managing trees near their homestead are given below.

Many people in Ntabazinduna also protect and prune acacia regrowth on field boundaries and contours in their arable lands. However, as the fields are far from the home it is more difficult to prevent people from cutting the trees as compared to those growing adjacent to their homes.

Family woodland management case studies

- Mr Maviva, one of the pioneers of woodland management, describes his shock on returning in 1968 after five years in detention to find the area he left well wooded virtually bare. He began immediately to protect the regrowth in the area surrounding his home. His example inspired many others, and eventually led to village-based efforts to manage regrowth in the communal grazing areas.

- Mrs Ncube is another individual who has been protecting trees since the 1960s. She arrived in the area in 1963, and was concerned about the absence of tall trees. All the trees adjacent to her home plot had been cut and only small scrub remained. She wanted the trees to grow back around her house so as to shelter it from the strong winds, and to beautify the area around her home. Soon after building her home she began to stop people cutting the acacia scrub around her house. The trees grew rapidly, forming a dense thicket, which excluded grass growth. It was only around 1983 that she learnt from others about the benefits of thinning and pruning the trees, and began to practice active management of the woodland. She was amazed at the dramatic effect that pruning and thinning had on both tree growth and grass cover. She now has a grove of approximately 2.5 hectares in size alongside her homestead, in which both the woody and grass biomass is noticeably greater than in the surrounding unmanaged scrub areas.

  The family derives numerous benefits from the woodland. In the first place they feel that the trees upgrade their living environment, by providing shade, shelter from wind, and beauty. The small woodland also provides shade, grazing, browse and pods for their livestock, as well as those of neighbours. Pruning and thinning operations yield small quantities of firewood, brush fencing and poles for household use - however they do not meet household requirements, and Mrs Ncube buys firewood from neighbouring commercial farms. Occasionally a tree is cut when there is a particular need for it, such as to replace poles in a granary.

- Mr Ndlovu began to prune and protect the scrub around his home in 1984, shortly after he settled there. Unlike many of the other individuals who have a defined area of woodland that they manage adjacent to their homes, Mr Ndlovu is gradually extending the area he prunes, year by year. He says his aim is to stimulate regrowth of woodlands in as wide an area as he can manage, for the benefit

of future generations. Like others, products he derives from the woodlands are of secondary concern to him, but he does mention the improved grazing that results from pruning. But as this is in a communal grazing area these benefits do not accrue to him alone.

Community Projects

Efforts by individuals to manage and protect the trees around their homes paved the way for group efforts to protect and manage regrowth in village grazing areas. Mr Maviva, who has been managing trees around his home since the 1960s, was elected as Ward councillor in 1983, and immediately began to promote woodland management on a wider scale. He began in the village where he lives, Nana village. In 1984 a group of villagers from Nana started to protect the thorn scrub in a portion of the village grazing area. Each year the area which they manage through thinning and pruning is expanded. The purpose of their efforts is:

- to improve grazing for livestock
- to stop the winds and "hold the clouds"
- to increase firewood supply

The successes of this small group gradually began to influence the others in the Ward, as well as in neighbouring Wards. The Councillor of the West Ward, Mr. Mathe, began to play a lead role in promoting woodland management in his Ward as well. During the 1991/92 drought year, community woodland management projects took a major stride forward, when villagers voted to include pruning and thinning operations as one of their activities under the Government relief food-for-work programme. Woodland management pilot projects in communal grazing areas thus began in eleven out of the twelve villages in West and North Wards, and in two villages in the South Ward. The influence of the Ward Councillors has been key to this development. Mr Maviva's strategy of leading by example and demonstration has been particularly effective. The practice of pruning and thinning rather than random cutting of whole bushes is now, according to Mr Maviva, "spreading on its own".

Management Techniques

Thinning and pruning

Thinning and pruning of the acacia bushes is done at the outset, and is repeated annually for the first few years and then only as often as necessary. Each bush is thinned to one main stem. The lower branches of the remaining stem are then pruned (this is referred to as "skirting" by neighbouring commercial farmers who use the same veld improvement practices). Whole plants can be removed if they are of poor form or too densely spaced. The initial thinning and pruning allows for increased growth rate of the remaining stem as well as improved grass growth between the shrubs. Eventual pruning height is in the region of 1m to 1.5m, sufficient to allow cattle to move freely underneath the canopy. Side branches are cut from the lower side upwards to prevent damage to the stem.

Tools used are mainly machetes and small axes. Long sticks with a small fork at the end are used to push back thorny branches and gain access to stem bases when cutting. There is scope for improving the supply, quality and maintenance of tools used.

The prunings are laid on the ground to slow down run off, trap seeds and protect new grass growth. Together, these measures bring about rapid rehabilitation of degraded areas. For example, in the Nana community project, the acacia scrub grew from an average height of 0.5m to 2m in four years (Clarke and Crockford, 1994).

Enrichment planting

Enrichment planting within the managed areas is not currently practised. During a workshop with the Thokozane villagers this issue was raised. The women made a list of species they would like to have more of in the woodland. The majority of these are popular indigenous fruit trees: *Vitex payos (umtshwankela), Azanza garkeana (uxakuxaku), Strychnos madagascariensis (umwawa), Berchemia discolor (ummyiyi), Vangueria infausta (umviyo), Mimusops zeyheri (umbumulu), Lannea discolor (isigangatcha), Diospyros mespiliformis (umdlawuzo), Strychnos pungens (umgwadi).* The only non fruit trees mentioned were *Euclea divinorum (umtshekesane)* which is favoured for its use as a toothbrush and for dye and *Lonchocarpus capassa (umkokolo)* favoured for its timber. Mr Maviva and Cllr Mathe did not support the notion of enrichment planting within the woodlands: they felt that it would be better for families to plant seedlings of the favoured species in their home compounds, where they could easily be protected and watered. One of the advantages of the current initiatives is that there is no need for fencing. The experience of pilot projects carried out in the 1980s where indigenous tree seedlings were planted out in grazing areas supports their concerns (Scoones *et al*, 1993).

Group organisation

In the group projects there is an emphasis on veld improvement for grazing, and grazing committees are responsible for spearheading the programme. In the community projects, there are two ways that pruning and thinning takes place:

- Organised group work, as happened recently under the Government relief food for work programmes.

- Individuals who want firewood or brush fencing are given a permit and directed and instructed on where and how to prune and thin by the village grazing committee. Anyone found cutting without a permit has their wood confiscated and is given a warning. Repeated violations are reported to the police who then issue a ticket, and the person has to pay a fine in the region of Z$50-100 (about US$5-10).

"Social" fencing

Livestock are said to be no threat to regrowth. There is visual evidence of this all over Ntabazinduna where woodlands have regenerated without fences. Cutting for firewood and brush fencing is the reason why the scrub remains at such a low height in unprotected areas. Families who are protecting trees near their homes appeal to neighbours to respect the area,

and if necessary intercept and threaten those who do not co-operate. This may be more difficult for widows and poor families who are not influential.

The more recent community projects rely on the co-operation and commitment of the villagers. This co-operation is a testimony to the patient and tireless work of Mr Maviva, who has consistently led by example. His emphasis has always been on engendering a "love for the trees, so that the people enact the law themselves". There is legal provision, under District council by-law legislation, to prosecute those who cut trees without authority, but this is very seldom invoked. The councillors estimated that there is only about one such case a year.

Discussion and Recommendations

Historical information emanating from the study reinforces the findings of other authors that State land use policies and political events, rather than the depredations of local people, have been, and continue to be, the major cause of environmental degradation and deforestation in communal lands (Gill, 1985; Wilson, 1990; McGregor, 1991; Katerere *et al*, 1993; Scoones and Matose, 1993). In Ntabazinduna, high population densities, resulting from land alienation and forced resettlement, led to widespread woodland clearance for arable lands as well as tree cutting for building of new homes. Colonial government policies, aimed at forcing people off the land to create an urban workforce (Ndlela, 1981), resulted in expansion of the urban fuelwood trade. On the one hand there was a growing urban population which required fuelwood (Whitlow, 1980) and on the other, rural populations were in need of cash to pay taxes (Palmer, 1977). During the liberation war, local people were instructed to cut many of the remaining trees to reduce cover for the guerrillas.

Moyo (1994) goes further, linking the history of communal lands to current strategies and responses to problems of deforestation. The violent history of land alienation and subjugation of indigenous people has resulted in polarisation between the strategies of public sector agencies and those of local people, with respect to addressing problems of deforestation. On the one hand, forestry extension approaches have their roots in racist ideology evolved to justify land alienation. Central to this is the notion that local communities are "backward" and "need educating". The backbone of forestry extension programmes has been the promotion of eucalypt woodlots. Local people tend to mistrust State forestry programmes which they associate with the coercive and restrictive policies of the past, such as land alienation, and forced clearing of indigenous woodlands to establish woodlots. Woodlot programmes have been largely unsuccessful as a result of this painful history as well as their failure to address the real resource needs of communities. On the other hand local communities have, out of necessity, evolved their own changing strategies in order to gain greater access to essential wild products associated with woodland areas. Public sector agencies, in keeping with their history, have tended to ignore and/or criminalise local level strategies to gain greater access to natural resources.

This polarisation between "official" and local level forestry strategies highlighted by Moyo (1994) are well substantiated by the Ntabazinduna case study. There is a very large eucalypt plantation which was established in the 1940s using forced labour to destump the existing indigenous forest occurring there. Whilst this plantation is a success in so far as it supplies poles and fuelwood throughout Ntabazinduna and beyond, there is lingering resentment that these products must be bought from the council. Furthermore, the plantation was established on the only patch of Kalahari sands in the area, which naturally supports a diverse forest ecosystem. Early maps of the first block of the plantation show a grove of *umkhuna (Parinari curatellifolia)*, a tree highly valued and respected for its role in rainmaking ceremonies as well as for its fruits. It appears that subsequent expansion of the plantation led to stumping of these trees as they are no longer in evidence today. Post Independence efforts by development agencies to promote school and community woodlots in Ntabazinduna have met with almost total failure (Clarke and Crockford, 1994).

On the other hand, community initiatives to protect and manage woodlands are widespread, and are now on the increase in Ntabazinduna. Prior to this study, these initiatives appear to have gone unnoticed by the staff of agencies involved in promoting afforestation activities in Ntabazinduna. Yet some simple measurements have shown that these efforts to manage indigenous woodlands are much more cost effective than woodlot establishment. Furthermore, indigenous woodlands provide a much wider variety of products and services than do woodlots (Clarke and Crockford, 1994). These observations in Ntabazinduna are supported by those of others in different parts of the country (Makuku, 1990). Influential local leaders have played a key role in the spread of woodland management initiatives. Their strategy of fostering a commitment to woodland protection and management amongst the people over a period of decades contrasts sharply with the "quick-fix" approach of most development agencies.

This study highlights key challenges facing social forestry research and extension, whilst at the same time provides some insight into how these challenges might be taken on. In the first place there is need to raise awareness and appreciation of local strategies on the part of research and extension staff. The next step is to develop capacity to support and build on existing initiatives. The process and outcome of this study show how participatory approaches, including PRA methods, can be used to achieve both of these objectives.

The use of PRA methods was an effective means to raise overall awareness and appreciation of local initiatives by researchers and extension staff alike. The focus of the study was on the history, evolution and current status of these practices. The local extension staff went on a week long introduction to PRA course prior to the study, and were thus able to work in partnership with the research staff in designing the methods and steps to be followed. The team began by planning the study together: which methods to use and in what sequence in order to obtain the information in which

we were interested. During the course of the study this plan was modified and adapted where necessary. After each day the team sat together in the evenings reviewing the outcome of the day and planning for the next session. The methods reported in this paper are those which were finally used, although in practice they were not quite as clearly sequenced as they appear here! In fact, the research was carried out over a period of more than a year of separate visits, each time deepening and broadening the information as well as supporting extension activities arising from the research. Tools such as the historical timeline, semi-structured interviews with key informants, visits to family and community groves, and village mapping were very effective ways for local informants to present and reflect on information about their practices and preferences.

In addition to raising awareness of local practices and documenting these, the study concurrently provided research and extension staff with insights and practical lessons in how to go about promoting community woodland management initiatives. The combination of research and extension objectives in this way can lead to better focused research and improved extension approaches.

A number of ways in which field staff can support and encourage the spread of woodland management practices emerged during the course of the study, and have since been incorporated into the plan of work of the Forestry Extension Officers. These include:

- visiting family and group woodland management projects and showing appreciation and a willingness to assist;
- arranging for study tours and field days within and between Wards to enable the sharing of ideas and the spread of these practices;
- facilitating and sponsoring workshops for villagers who have started group woodland management projects, to enable them to review their progress so far, and to plan and carry out further pruning and thinning operations;
- provision of improved pruning tools and advice on how to use them.

The village mapping techniques used in the research proved to be a very useful tool for enabling villagers to visualize their grazing areas, to plan and to evaluate woodland management efforts.

At the same time the study has served to define priority research needs for optimising existing management practices. These include the need to investigate management and harvesting options for sustainable utilisation of the range of desired products, including those for mixed livestock production, and a deeper understanding of institutional and socio-economic factors which are behind these initiatives.

In order to address the above research and extension priorities, the same adaptive research and extension model described in this study will continue to be used. Important features of this approach are:

- the involvement of local communities in all aspects of the programme;
- integration of research and extension; and
- an iterative, heuristic approach which incrementally broadens and deepens with each successive step taken.

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Supporting Local Initiatives in Woodland Regeneration: a case study from Ntabazinduna communal land, Zimbabwe

This paper describes woodland management initiatives that have developed in a communal area in Zimbabwe. It is argued that government woodlot programmes have been largely unsuccessful and fail to address the real resource needs of communities. It is in this context that local communities have evolved their own changing woodland management strategies. These practices are entirely local in their origin, usually developed first by individuals who then lead by example and demonstration. The authors discuss how an emphasis on both study methodology - using participatory research techniques - and findings allows a greater understanding of how to document, promote and build on existing resource management practices at local level. The early stages of cooperation with these locally-derived practices by government forest extension staff is also described.

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