

Social Learning in Community Forests

Edited by

Eva Wollenberg
David Edmunds
Louise Buck
Jeff Fox
Sonja Brodt

A Joint Publication of
CIFOR and the East-West Center
2001

*Cover design adopted from traditional Dayak
Kenyah (East Kalimantan) "saung seling" weaving*

© 2001 by Center for International Forestry Research
All rights reserved. Published in 2001
Printed by SMK Grafika Desa Putera, Indonesia

ISBN 979-8764-77-3

Published by

Center for International Forestry Research
Mailing address: P.O. Box 6596 JKPWB, Jakarta 10065, Indonesia
Office address: Jl. CIFOR, Situ Gede, Sindang Barang,
Bogor Barat 16680, Indonesia
Tel.: +62 (251) 622622; Fax: +62 (251) 622100
E-mail: cifor@cgiar.org
Web site: <http://www.cifor.cgiar.org>

Table of Contents

<i>Contributors</i>	ix
<i>Acknowledgements</i>	xiii
<i>Foreword</i>	xv
Chapter 1	
Social learning in the collaborative management of community forests: Lessons from the field <i>Louise E. Buck, Eva Wollenberg and David Edmunds</i>	1
Chapter 2	
Facilitating viable partnerships in community forest management in Cameroon: The case of the Kilum-Ijim Mountain Forest Area <i>Christian A. Asanga</i>	21
Chapter 3	
Platforms for learning: Experiences with adaptive learning in Nepal's Community Forestry Programme <i>Ghanendra Kafle</i>	45
Chapter 4	
Seva Mandir: A learning organisation <i>Rukmini Datta</i>	65

Table of Contents

Chapter 5 Institutional collaboration and shared learning for forest management in Chivi District, Zimbabwe <i>Nontokoza Nemarundwe</i>	85
Chapter 6 Rethinking the role of consensus in pluralism: Learning from community-based forest management in Yunnan, China <i>Cao Guangxia and Zhang Lianmin</i>	109
Chapter 7 External donors and community-based management of Mgori Forest, Tanzania: What happens when the donors leave? <i>Edward Massawe</i>	127
Chapter 8 Model forests: A partnership-based approach to landscape management <i>Ron D. Ayling</i>	151
Chapter 9 Learning how to devolve: The Social Forestry Project, Malakand, North-West Frontier Province, Pakistan <i>Haider Ali Khan</i>	173
Chapter 10 Beyond rhetorical success: Advancing the potential for the community forestry programme in Nepal to address equity concerns <i>Bishnu Upreti</i>	189

Chapter Five

Institutional collaboration and shared learning for forest management in Chivi District, Zimbabwe

Nontokozi Nemarundwe

Abstract

This chapter examines processes of collaboration among institutions for communal woodland management at the local level in Zimbabwe and explores how these processes influence sustainable resource utilisation. I discuss how institutions adapt to changing social and environmental conditions. Based on case study evidence, I argue that community-based natural resource management works best in a context of institutional collaboration and shared learning. I identify three requirements for collaboration: the need for effective facilitation of experimental learning, equal power in the learning process and the willingness to engage in a multi-stage process that can be costly.

INTRODUCTION

Failure to achieve sustainable natural resource utilisation has been attributed to the continued focus on management without consideration of the institutional framework within which that management is effected (Ostrom 1990; Sithole 1997). In this chapter,

I examine the applicability of theories of common property resource management and adaptive management to institutional issues in the management of communal woodland resources in Chivi district, Zimbabwe. I examine two aspects of the growing literature on local institutions for natural resource management. First, I discuss the processes of collaboration among institutions for woodland management *at the local level* and how these processes influence sustainable resource utilisation in the context of communal lands. Many authors express an increasing interest in understanding conflicts over resource utilisation with regard to centre-local relationships (Fisher and Jackson 1998; Matose 1994; Matzke 1993; Moore 1993). While these relations are very important, it is easy to overlook how institutions operating at the local level collaborate before and after they interact with external agents. The consequences of this neglect are best illustrated in cases where external agents attempt to construct new local institutions, often following the principles of Ostrom and others, without understanding the potential relationships between these institutions and other, pre-existing local institutions, such as traditional authorities.

Second, I discuss how local institutions adapt to changing social and environmental conditions. Ostrom (1990, 1998) focuses on local level institutions in her design principles, which are explicit about the features of enduring institutions. Her design principles are not, however, very explicit about how institutions adapt to ever changing environments. Although Ostrom talks about constitutional change as a way of responding to changing circumstances, there are no clear guidelines as to how such change should take place. In this case, social learning theory (Röling and Wagemakers 1998) can be adopted to complement Ostrom's conceptual framework, as it contributes insights as to how local institutions can adapt to changes over time.

Based on case study evidence from Romwe in Chivi communal lands, southern Zimbabwe, this chapter argues that community-based natural resource management works best in a context of local level institutional collaboration and shared learning. I describe the changes in local level collaboration and learning introduced through use of the *kukuraya* approach, a participatory means of experimentation (Chuma *et al.* 1997; Hudson 1981). The case demonstrates that learning-by-doing is key to collaborative management. The focus for collaborative management, therefore, should not be on establishing institutions that endure, but on creating institutions that adapt.

BACKGROUND

Conceptual framework

Two contending discourses have dominated the inquiry into Common Property Resource (CPR) management. The first contends that collective use of natural resources is a disincentive for investment in sound management. This viewpoint argues that common property is equivalent to open access tenure arrangements, and therefore people have little incentive to work for long-term productivity or environmental gains. Hardin's (1968) 'Tragedy of the Commons' idea has been very influential in the propagation of this view.

Identifiable groups of interdependent users of a given common property resource are assumed to have a strong stake in the collective management of the resource (McCay and Acheson 1987; Ostrom 1990; Lawry 1989). This view has informed democratised visions for sustainable management of natural resources, particularly in rural areas of developing countries where power over land and natural resources has been usurped by the state or its arms (Mandondo 1997).

In the common property literature, institutions are thought to shape human behaviour in relation to resource use. The term institutions is here used to refer to resource management organisations or authorities. In this chapter, organisations or authorities are defined, following North (1990), as governance structures that are established to manage human interaction. Rules and regulations are treated as institutional arrangements. Institutional arrangements often form the basis for guiding the activities of an organisation, though they may also be informal, and not associated with any specific organisation. The rules and regulations in use by a community determine who has access to common pool resources, what use-units authorised participants can consume, at what times and who will monitor and enforce these rules (Ostrom 1998). This study covers both formal and informal institutions and institutional arrangements.

The CPR literature pays scant attention, however, to collaboration among local institutions. Yet throughout Africa, a variety of traditional institutions exert influence on decision making at the local level (Berry 1989). Traditional institutions also often co-exist with introduced institutions. Understanding the conditions under which these local institutions collaborate or compete with each other and with new institutions

working at the local level will improve the chances of sustainable forest management in areas where the institutions share responsibility.

One such condition of collaboration might be a shared approach to learning and adaptation. While much of the CPR literature provides insights on how local level institutions may be constituted and sustained, it is not explicit about how they adapt to new situations (McCay and Acheson 1987; Ostrom 1990). As Cleaver (1999) argues, most of the CPR literature treats institutional issues in a static perspective and not as a living tradition. Mandondo (1997, 1998) has also questioned the lack of dynamism in much of the literature on local institutions. He argues that the issue of appropriateness of institutions appears to have been driven by the quest to attain enduring institutions. He further stresses that ‘in the context of variegated and ever changing resource use contexts, it may be more useful to aspire to adaptive institutions instead of those that simply endure’ (1998:18).

Social learning theory becomes relevant in this context as it can enrich the CPR approaches to institutional analysis. It provides insights about how institutions can evolve to deal with changing circumstances (both social and environmental). Social learning is a ‘framework for thinking about knowledge processes that underlie social adaptation and innovation’ (Woodhill and Röling 1998:64). Where interest groups are interdependent and environmental chance is uncertain, the effects of management may be unpredictable for all groups concerned. An adaptive or learning approach enables an iterative approach to dealing with uncertainty that minimises risks based on matching actions to the information available. The social learning framework highlights the importance of *group* learning for collaborative natural resource management. Meaningful interaction and communication between individuals and groups (including different local level institutions) is central to the social learning process.

The study area

The study was conducted in the Romwe Catchment located in Chivi District, Southern Zimbabwe (see Figure 5.1). The catchment is about 4.5 km² in size and home to about 50 households. Chivi District is characterised by low rainfall, poor soils for agricultural production and seasonal droughts. Being quite dry, it is not very conducive for agricultural production, creating competition for woodland resources such as fruit, honey and wood

for carving. The resulting uncertainty associated with resource use suggests the need for a flexible, adaptive approach to management.

Changes over time in population and land pressure in the area add complexity to community-based resource management and the related local resource management institutions. The district was a site for forced in-migration during the early 1950s as a result of the designation of some land as commercial farming areas. The current population comprises Shona- and Ndebele-speaking people with different ethnic backgrounds. The different ethnic groups have different belief systems and patterns of resource use. In-migration and ethnic diversity pose challenges to collaborative resource management at the local level, and suggest the need for institutions that can adapt to changing social conditions.

Administratively, the catchment area lies in Wards 23 and 25 of Chivi District. The administrative, traditional authority, and the resource use boundaries do not coincide with one another. Three villages (*kraalheads*) fall under the Romwe catchment, namely Dobhani (Ward 25), Sihambe (Ward 23) and Tamwa (Ward 23). Two of the three *kraals* are only partly contained within the catchment: Sihambe, situated on the northern side, and Dobhani, on the southern side. Such administrative overlap indicates both the difficulty and necessity of effective collaboration among local institutions (Table 5.1).

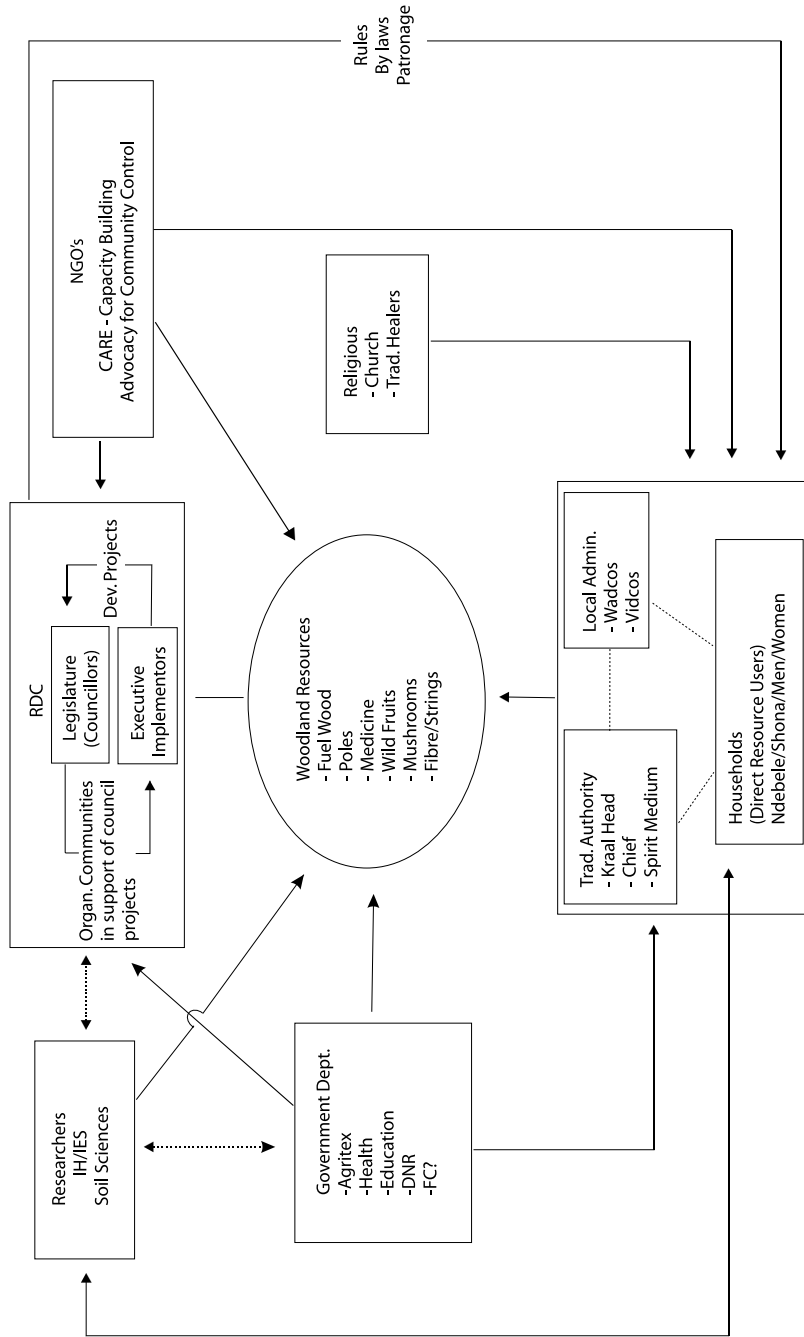
At the local level, there is a multiplicity of institutions involved in woodland management. These include state-supported extension organisations or parastatals, local government structures and the traditional authority. Non-governmental organisations (NGOs) and research groups are also identified by the community as relevant institutions. The various roles and responsibilities of these institutions have evolved at different times. Figure 5.2 illustrates the relationships among the woodland management institutions found operating in the study village.

The existence of multiple institutions for woodland management makes collaboration at the local level difficult. Their changing mandates, interests and power to influence resource management also suggest that no one form of collaboration can remain viable for long. Mechanisms are required to enable the process of collaboration itself to be flexible.

Table 5.1 Women's ranking of importance of institutions operating in the Romwe catchment area

Institution	Rank	Reason for the rank
Sabuku/ chiefs	1	Set rules that guide people on resource use; they are generally respected; they allocate land; resolve disputes which enable the community to live in harmony; owners of the land
Councillors/ VIDCO	2	Spearhead development by forwarding village members' requests to the Rural District Council
Health services	3	Provide treatment, midwifery and immunization services, although people have to pay for some of the services especially at the hospital; health services are provided throughout the year
CARE International	4	Provides tools for rehabilitating dams through the food for work programme—these benefit people and improve water supply for livestock; they are based outside the village but come frequently
Church	5	Teaches people good morals; helps keep families together; gives moral support during illness and when death occurs in the family
Teachers	6	Provide education to children which is vital
Agritex	7	They are always in the area; they assist in fields and gardens; have effective extension; work well with people; peg fields; have open interaction with people and cover a wide area
Researchers	8	Carry out research in small areas; deal with a few people, e.g., field trials in few fields; provide the community with transport
DNR Jengetavhu	9	Has a local representative who is supposed to work with the kraalhead police. Rarely enforces fines, e.g. for starting fires, which is considered a serious offence in the village
Zimbabwe Farmers Union	10	Not well known in the area; come during the growing season only; sell seeds—only a few people benefit; membership fees have to be paid
ZINATA ¹	11	Visits to ng'ngas (ZINATA) are made secretly; they are not open; make claims that cannot be proved, e.g., that they can cure AIDS; very few people still rely on or visit ng'ngas

Figure 5.2 Institutional framework for woodland management in Romwe catchment



THE ROMWE CATCHMENT CASE STUDY

I participated in the processes described below as a researcher, with an interest in both participatory research methods and participatory natural resource management techniques. I have been working in the area for one year and am affiliated with the Institute of Environmental Studies, a research institute with a long-term commitment to the Romwe Catchment. Working with a team of four researchers, data collection methods included literature reviews, key informant interviews and participatory rural appraisal techniques. The study was undertaken from July 1998 to July 1999.

This section presents the case from Romwe to illustrate attempts at centre-local collaborative management that have worked and attempts that have not worked. I explain the reasons for their outcomes. The case demonstrates that an absence of collaboration among local institutions can lead to unsustainability. Even where local institutions, both traditional and newly created, embody many of the design principles described by Ostrom (1998, 1999), the Romwe case suggests that a social learning approach to management is one way to overcome current differences in institutional priorities, sources of support, legitimacy and culture, and to encourage effective collaboration.

In Romwe, both traditional institutions and newly created village development committees (VIDCOs) and ward development committees (WADCOs) match most of Ostrom's criteria for enduring institutions.² Such institutions should have a good chance of sustainably managing common property woodland in the catchment. Traditional authorities, VIDCOs and WADCOs have their boundaries clearly established, even if these are not the same boundaries for the different institutions. Though the distribution of costs and benefits related to woodland management in each is not perfect, it is reasonable compared with other local institutions discussed in the literature (Dzingirayi 1997). Traditional authorities, VIDCOs and WADCOs all have monitoring and conflict resolution mechanisms in place, as well as methods for making collective choices about management practices. Traditional authorities are not as clearly nested within larger government structures as VIDCOs and WADCOs, but they are recognised to some extent by government. While both the VIDCO/WADCO structure and the traditional leadership, especially the *sabuku (kraalhead)*, meet many of Ostrom's design principles, in the absence of collaboration, resource management efforts at the local level have not been successful.

Management that failed: The case of settlement in grazing areas in Romwe

During the 1950s and 1960s, three traditional authorities were concerned with resource management: the *sabukus* of the Ndebele and Shona, Shona headmen and a Shona chief³. These traditional authorities were generally effective in the distribution of resources such as land and in resolving disputes such as boundary friction occurring at the household level. The traditional authorities also governed the use and management of woodlands. According to local people, cases of norm breaking were very limited. Although traditional authorities had some interaction with extension workers and the district administrator, they had autonomy in management at the local level. This reduced the incidence of offenders, as the control system was clearly defined. Many villagers, for example, claim that during that time, everyone respected sacred areas of the Shona, even recent Ndebele-speaking in-migrants, for whom these sacred areas were not culturally important.

During the peak of the war of liberation in the 1970s no other institution had control over resource use except the guerillas. The traditional authorities were weakened. The absence of strict control over resources such as the woodlands and grazing areas encouraged some people to settle in grazing areas. Extension workers were not operating in the area during this time. The period immediately after independence is referred to by local people as *mazvakemazvake* (each person for him/herself). During this time, no institution existed to govern woodland resource use. Much deforestation occurred, which spurred the government to create a central forestry authority and corresponding regulations.

As part of the government's subsequent decentralisation process, however, and in an effort to better control forest use, new local government structures were created in 1982. These were the popularly elected village development committees (VIDCOs) and ward development committees (WADCOs), which are legally mandated to monitor resource use. Forestry and agricultural extension agents, for example, consult with these committees to resolve the problem of woodland conversion into arable land. On the ground, however, some traditional leaders still have more respect from community members and have their own rules and regulations, although these are not on paper. Although the traditional authorities were weakened during the war, and continue to lack legal recognition, they have retained much of their legitimacy after independence

(Government of Zimbabwe 1994; Mandondo 1998). They continue to exert significant influence over resource management, including over issues such as the conversion of woodlands to grazing areas. In fact, many offenders have ignored VIDCO/WADCO rules on conversion of woodland because they pay more allegiance to traditional authorities.

The presence of multiple local authorities has led to conflict over the use of common pool lands. Box 5.1 presents a case of individual privatisation of a common pool land resource that has traditionally been used by community members for woodland products such as firewood, poles, fruit and fibre. This privatisation occurred partly as a result of overlapping authority of resource management institutions.

Box 5.1 Mr. Jonasi Dube's case⁴

My father settled in the area in 1963 when land was abundant. When I got married in 1989, he gave me part of his crop fields. The land had been overworked and was barren, so I felt I could not live on such poor soil. I went to work in South Africa as a migrant worker and when I came back in 1995 I asked my *sabuku* to allocate me a piece of arable land. The *sabuku* referred me to the VIDCO chairman, who gave me permission to clear part of Barura hill as a crop field. The area is rocky and sloping, so last year I went back to the *sabuku* to ask for better land to establish a vegetable garden in the grazing area and explained to him that the VIDCO chairman had given me land with very poor soils. The *sabuku* said if it was for the welfare of my family I should go ahead. So I fenced off a small piece of land in the grazing area which was being used as a road for carts. I opened up a detour which the carts could use to go around my garden. I dug a well in the middle of the garden so that I could have a reliable source of water all year round. At the present moment (July 1998), the well is more than 5 m deep and produces about 400 l of water every two days. Other villagers cannot collect water from my well. I want to use it to grow vegetables to sell to big supermarkets in Masvingo. Other villagers are complaining that I fenced off an area which they used in the past and they are not getting water from my well. The case was reported to the *sabuku*, but he said the councillor should resolve such issues. Nothing has been done and I continue to use my garden.

This case is one of many in which young land seekers liaise with one of the local institutions to get land in the absence of consensus. Although there has been a slow process of encroachment on common lands since independence (1980), the incidence of such cases rose dramatically in 1993–4. This increase may have been stimulated by a decrease in urban employment after many companies closed down as a result of economic hardships partly caused by the economic structural adjustment. A high level of woodland conversion occurred as a result of the ensuing settlement in grazing areas and lack of control over grazing. The availability of many woodland products has since declined. The existence of the traditional authorities (chiefs and *sabukus*) and statutory institutions (VIDCOs and WADCOs) without well-defined mandates and articulation processes, and their reliance on contrasting sources of legitimisation (customary versus state) have caused conflicts that have undermined the scope for coordinating land use decisions. These sorts of conflicts have persisted over time, indicating that the VIDCOs and WADCOs have not effectively learned how to work with other local authorities. Other conflicts that villagers have identified as resulting from a lack of institutional collaboration include cultivation of fragile areas such as stream banks and a lack of respect for sacred areas that traditionally served to protect diverse tree species.

The decentralisation process therefore lacked mechanisms to allow for the government institutions to learn about and coordinate with an existing key institution at the local level, the *sabuku*. Even if they recognised the existence of the *sabukus*, government and extension agents had no mechanism or incentive at the time to involve the *sabukus* in the planning, action, monitoring and evaluation necessary for group learning (Gilmour and Fisher 1997). It took more than ten years, from the early years of independence to the time of the Land Tenure Commission in 1994, for extension agents and local government to recognise the need to involve the traditional authority in natural resource management initiatives and to learn from their shortcomings. If the agents and other government officials had established a system to help them learn and reflect on their actions, they probably would have been better able to recognise the influence of traditional authorities earlier and might have avoided many years of chaotic woodland conversion.

Management that worked: Adopting the *kukuraya* (experimentation) approach

It was in this context that in 1999 villagers from Romwe, together with traditional leaders, VIDCOs and extension workers, adopted an experimental approach for tree and grass planting for rehabilitating an area that was traditionally used for woodland resources. This approach was taken up after a group look and learn visit to a neighbouring village, where an experimental approach to soil and water conservation, known as *kukuraya*, had been adopted.

Kukuraya is a Shona term for ‘trying out’. It is a participatory research and experimentation approach introduced in Chivi District, Ward 25 by extension agents after a realisation that conventional extension methods were not effective (Chuma *et al.* 1997; Chuma *et al.* 1998). It operates under the philosophy that farmers need to understand and share their views about the dynamics of their environment and the biophysical processes at work in order for them to have a higher capacity to generate land husbandry solutions. Farmers must have access to a variety of ideas and technical options so that they can experiment with and identify the strategies most suitable for their own context.

Key elements of the *kukuraya* approach include:

- 1) Enhancing farmers’ creativity and their capacity to use technical principles, elements and ideas to arrive at a solution appropriate to the situation.
- 2) Reducing farmers’ dependence on the knowledge of extension agents and promoting information sharing.
- 3) Encouraging farmers to learn by doing by being involved in action and debate. People learn more in a process of action, reflection, self-evaluation and new action.
- 4) Motivating various interest groups to analyse their situation together.
- 5) Using a facilitator, especially during the initial stages of the project.

Various strategies have been used to encourage the group social learning process. These include:

Resource management experiments. In the *kuturaya* case, farmers engage in a number of soil and water conservation experiments. One example is the simple paired design experiments for comparative purposes (Chuma *et al.* 1998). In this case, conventional practice and new ideas are compared by placing them side by side in the field. Both sites are monitored closely and the farmers analyse what they see. This leads to an understanding of the processes and factors that influence the performance of technologies and is referred to, by Chuma *et al.* (1998:33), as learning by experimenting.

Community workshops. Conservation awareness is raised through debate and joint analysis of change during community workshops. The social learning process creates shared visions formulated by the group and makes plans for working towards those visions. This form of learning focuses mainly on evaluating the impacts of a management practice on the resource being managed. Community workshops also increase interaction among the various interest groups, however, which helps institutions to build trust and to learn about how to collaborate with other institutions.

Use of metaphors and folklore. A key feature of both Shona and Ndebele cultures is the use of figurative language and folklore. Traditional leaders, especially, have found metaphors and folklore to be useful during joint analysis meetings to communicate the concept of learning-by-doing. One *sabuku* told the following story: ‘Once upon a time, there was an old lady from Chivi. During a year of hunger, the lady searched for fruits, small game and tubers, but could not find any. Finally she decided she should cook stones, maybe they could become edible. So she cooked the stones and to her joy, they produced a tasty soup’ (Chuma *et al.* 1998:31). This story was used as an illustration of the idea that trying out seemingly far-fetched things is not a new concept, but has been known and encouraged in their traditional society. This lesson has motivated the villagers in Romwe to participate in experimentation with tree and grass planting in the most degraded parts of the grazing areas. Other metaphors and stories have been used to create shared understanding among different interest groups about the importance of access to firewood, fruit, fibre, fodder, honey and medicinal plants found in the woodlands, and how various management activities affect different interest groups.

Group look and learn visits. Woodhill and Röling (1998) argue that village-to-village interactions are a platform for learning for villagers that increases the chance of local level collaboration. Learning across communities can also enable institutions to adapt to change. The Romwe group look and learn visit described below supports Woodhill and Röling's argument.

Look and learn visits involve travel to a site by representatives of diverse local institutions to exchange ideas with others confronting similar resource management problems. The visits can provide insights about specific technical solutions to management problems, but are perhaps most useful as a platform for 'double loop' learning (Maarleveld and Dangbégnon 1998). Double loop learning occurs when institutions change not only their actions, but also their assumptions on which practices have been based, as a result of some feedback mechanisms (Maarleveld and Dangbégnon 1998:5; Datta, this volume). Creating such platforms for double loop learning can help institutions adapt to changing circumstances by facilitating periodic and systematic evaluation of their fundamental principles and work habits. Look and learn visits can act as such a platform by exposing institutions to others operating under different assumptions and strategies.

Trying out the *kuturaya* approach in Romwe: Tree and grass planting in the degraded parts of the grazing areas

As described above, random settlement in grazing areas and uncoordinated grazing have resulted in the degradation of areas traditionally used as a source of woodland products, and for controlled grazing. Early attempts by extension agents to prevent degradation were not successful. Having seen the *kuturaya* case in the neighbouring village, extension workers and some researchers organised a look and learn visit to the project for Romwe representatives in early 1999. The goal was to help them in thinking about how to solve their own environmental problems, especially in the grazing areas. The group that visited the project included traditional authorities (represented by *sabukus*), the VIDCO chairperson, government councillors, Agritex workers, NRB representatives and some researchers from the University.

During the visit, discussions were held with the farmers participating in *kuturaya* who shared their experiences with the experimentation process. They described both successes and problems they experienced during the process (see Box 5.2). Field visits had the most visual impact on the visitors. The Romwe group expressed surprise at the progress the *kuturaya* farmers had made. They were motivated and determined to engage in a similar experimentation process in the context of woodlands and grazing management.

Box 5.2 Successes and challenges of the *kuturaya* project

The *kuturaya* project has largely been considered a success. However, the experimental approach has created new challenges for the people involved, especially the villagers, related to their time and labour inputs for experiments and to managing information about the project within the community. Following is a quote from Mr. Isaac Siziba.⁵ ‘Prior to independence, we were forced to construct contour ridges. We were told that this would prevent soil erosion in our fields. We didn’t really understand why we had to dig the contours and this was very labour intensive as well. At independence most people deliberately destroyed the contour ridges because we saw this as one of the ways of the oppressors. During the mid 1980s, we were taught by agricultural extension workers new cropping methods such as planting in lines which they said will assure us of good yields. We did not understand these and we were also hesitant to adopt them. Now, after having engaged in the experimentation process, together with extension workers, we have discovered ways of conserving our soils, we get higher yields than before and we have a better understanding of our environment. We have discovered that building check dams in rills, leaving grass strips and creating small barriers to prevent concentrated flow from anthills are more effective than the standardised mechanical designs such as the contour ridges. We now understand better the causes and effects of soil erosion and we are able to monitor the experiments ourselves. This has also given us a chance to interact with people from all over the world as they come to visit our project.

Despite all this we have also faced some challenges here and there. I remember the first time we made the small barriers to prevent concentrated flow from anthills, they were too small and they got washed away when heavy rains fell. We had to reconstruct these and it takes a lot of time, labour inputs and patience. Although it is a good thing that we have many visitors coming to see our project, it is also time consuming because we have to spend some time with them. Jealousies also arise, for instance when some people feel that external agents interact more with the community representatives. We try to guard against this by being open and holding regular meetings so that people are kept informed.’

After returning to the village, a meeting was called and representatives that had visited *kuturaya* shared their experiences. After some lengthy discussions, the community decided that its members should begin experimenting by planting trees and vetiver grass in one degraded area of the village (Figures 5.3, 5.4 and 5.5). Some community members have been chosen for monitoring to ensure that livestock does not destroy the seedlings. Since the project is in its initial stages, no formalised monitoring and evaluation plans have been put in place. There is therefore a need for both internal and external agents to develop monitoring tools and techniques and for community representatives to implement them. Currently the process is being facilitated by extension agents and researchers from the University of Zimbabwe. Other institutions involved include the traditional authority, VIDCOs and WADCOs, members of the community and CARE International. Some of the tools and techniques used in the *kuturaya* project, such as community workshops, the use of metaphors, folklore and role plays, field days, look and learn visits and other participatory resource management tools will be adopted as appropriate.

Figure 5.3 Degraded gully to be reclaimed



Figure 5.4 Grass donated after the visit to *Kuturaya* project



Figure 5.5 Attempts to reclaim gully with vetiver grass



The organised look and learn visit to the *kuturaya* project helped people and institutions operating in the area to collaborate in resource management based on sharing of experiences in the experimentation process. Joint participation in community workshops, field days and look and learn visits has helped to build trust among institutions and to develop shared understanding of the problems facing different interest groups. The experimental approach has also helped form the basis for joint monitoring and evaluation of different types of management, and may lead to more collaborative decision making. Although the approach is still new, the impact on improved collaboration can already be felt.

The adoption of *kuturaya* illustrates the importance of organised interaction for group learning. The *kuturaya* process has been ongoing for more than five years now in the village next to Romwe catchment. Individuals from Romwe have previously had interactions with farmers involved in *kuturaya* without adopting the approach. It was only after the group look and learn visit to that village that the Romwe institutions really learned from *kuturaya*. Much of the degradation of Romwe's woodlands could perhaps have been avoided if a collaborative learning approach had been adopted earlier.

CONCLUSIONS

This chapter has argued that in the context of ever changing woodland resource use, it may be more beneficial for community-based resource management programmes to strive for adaptive resource management institutions instead of those that simply 'endure'. The concept of 'enduring' raises connotations of static situations, yet no institution is permanent (Berry 1993). The chapter also highlights the need to develop group learning and experimentation processes and to increase institutional collaboration at the local level in order for participatory natural resource management to be successful.

A number of key issues arise from the Romwe case. Several of these relate to questions of how to bring about effective social learning. I focus on three aspects of collaboration and group learning: the importance of good facilitation, equal power in the learning process and the fact that social learning is a multi-stage process that can be costly, a fact that needs to be taken into account during the planning stages.

It has been argued that collaborative social learning may be difficult to implement as this requires a lot of technical (especially for facilitation) and financial support (Chuma *et al.* 1998; Röling and Jiggins 1998). Effective facilitation of learning involves making things visible and helping people to reconstruct their realities through experimentation, observation and meaningful experience (Woodhill and Röling 1998: 68). Based on the *kuturaya* approach, I would argue that the key to success of a learning-by-doing approach is good facilitation, especially during the initial stages of the experimentation process. In this case the facilitation was done jointly by extension agents and researchers from the University of Zimbabwe.

While the facilitation role may be undertaken by external agents such as extension agents or personnel from non-governmental organisations, initially these bodies are never neutral and may not always reflect local village's priorities. Over time local institutions may want to develop the capacity to facilitate the process themselves through the provision of training. The current external facilitators therefore need to impart facilitation and coordination skills to local institutions.

The facilitation process should also aim at bringing together the various resource management institutions involved because their jurisdictions do not neatly coincide with resource use boundaries, posing a major challenge to institutional collaboration. It is worth noting that Zimbabwe's current models for community-based natural resource management have tended to focus mainly on the centre-local interface. Developing and promoting similar initiatives in the communal lands context is a challenge that requires attention from various interest groups.

Because social learning is a multi-stage process (Korten 1984; Kemmis and McTaggart 1998) and involves the investment of time and effort over long periods of time, it may be costly. The *kuturaya* experimentation process illustrates the multi-stage processes involved. Farmers, together with the external agents, agree on the management issue at stake, discuss and agree on some management approach to be tested, make a plan of action, implement the plan, review and reflect on the outcome and use this outcome as a basis for further planning and action. The need for agreement at each stage requires frequent consultation among interest groups and significant inputs and information management, all of which can be costly. Also, in a collaborative experimental approach, mistakes are common, as can be seen from the challenges faced in *kuturaya* described in Box 5.2. As a result, both material and human resource inputs may be high.

In the beginning of the process, as noted from the early stages of the Romwe case study above, it is important to identify all the key institutions that need to be involved. Grimble *et al.* (1995) note that after identifying the various interest groups, a process of verification is necessary to confirm that all groups are represented. After the key institutions have been identified, they all have to be involved in such a way that they all feel ownership of and equal power in the learning process. In the Romwe case, for example, key institutions such as the traditional authority, local government structure, non-governmental organisations, researchers and extension agents need to be fairly involved in the learning process. If some institutions do not feel that they are fairly represented, problems similar to those described in Box 5.1 may arise.

A social learning approach helps us to address two of the principle shortcomings of current theories on local institutions. First it adds needed emphasis on the importance of collaboration among different local institutions. Second, it provides insights on how local institutions can adapt to changing environmental and social conditions. As such, if most of the challenges discussed above can be addressed, a social learning approach has great potential to promote more effective collaboration among local institutions, and, ultimately, more sustainable forest management.

ACKNOWLEDGEMENTS

Funding for this research was provided by the Center for International Forestry Research (CIFOR) and the Department for International Development-funded Micro-Catchment Management Project. Guidance during fieldwork was received from Bruce Campbell of the Institute of Environmental Studies, University of Zimbabwe and Wil de Jong from CIFOR. I would also like to acknowledge insightful comments from David Edmunds from CIFOR. The East-West Center provided an excellent writing environment. Last but not least thanks to Witness Kozanayi for his professional research assistance.

ENDNOTES

¹ Zimbabwe National Traditional Healers Association.

² Ostrom's criteria are: i) that there should be clearly defined resource use boundaries; ii) congruence—fair distribution of benefits and costs; iii) collective choice arrangements; iv) monitoring; v) graduated sanctions; vi) conflict resolution mechanisms; vii) minimal recognition of rights to organize and for CPRs that are part of larger systems; viii) nested enterprises (Ostrom, 1990).

³ The traditional authority structure is made up of the *sabuku* (kraalhead) who is at the bottom of the hierarchy. The *sabuku* reports to the headman who in turn reports to the chief (who is at the top of the hierarchy).

⁴ Names of individuals have been changed to maintain confidentiality.

⁵ Names have been changed to maintain confidentiality.

LITERATURE CITED

- Berry, S. 1989 Social institutions and access to resources. *Africa* 59(1): 41–55.
- Berry, S. 1993 No condition is permanent: The social dynamics of agrarian change in Sub-Saharan Africa. University of Wisconsin Press, Madison.
- Chuma, E., Chiduzza, C. and Utete D. 1997 Training Manual: Soil Fertility management for smallholder farmers in Zimbabwe. IES Report Series, Paper number 4. Harare.
- Chuma, E., Hagmann, J. and Gundani, O. 1998 Supporting farmers' land literacy: tools for learning about soil and water conservation. *The Zimbabwe Science News*. 32(2/3, April/September): 30–34.
- Cleaver, F. 1999 Moral ecological rationality, institutions and the management of common property resources. Paper presented at the African environments conference, 5–7 July 1999, St Anthony's College, Oxford, UK. (forthcoming in *Development and Change*)
- Datta, R. This volume. Seva Mandir: A learning organisation. *In*: Wollenberg, E., Edmunds, D., Buck, L., Fox, J. and Brodt, S. (eds.) *Social Learning in Community Forests*, pp.65-84. CIFOR and East West Center, Indonesia.
- Dzingirayi, V. 1997 Take back your CAMPFIRE: A case study of the communal areas management programme for indigenous resources in Binga District, Zimbabwe. University of Zimbabwe - CASS, Harare.

- Fisher, R.J. and Jackson, W.J. 1998 Action research for collaborative management of protected areas. Paper presented at the workshop on Collaborative Management of Protected Areas in the Asian region. Sauraha, Nepal, 25–28 May 1998.
- Gilmour, D and Fisher, B. 1997 A project or a process? *In*: Borrini-Feyerabend, G. (ed.) Beyond social fences: seeking social sustainability in conservation, 103–106. Volume 2: A resource book. IUCN, Gland, Switzerland.
- Government of Zimbabwe. 1994 Report of the commission of inquiry into appropriate agricultural land tenure systems. Government Printers, Harare.
- Grimble, R., Chan, M.K. Aglionby, J, and Quan, J. 1995 Trees and trade-offs: a stakeholder approach to natural resource management. Gatekeeper Series No. 52. International Institute for Environment and Development, London.
- Hardin, G. 1968 The tragedy of the Commons. *Science* 162: 1243–1248.
- Hudson, N.W. 1981 Social, Political and Economic aspects of soil conservation. *In*: Morgan, R.P.C. (ed.) Soil Conservation: Problems and Prospects, 45–54. Wiley, Chichester.
- Kemmis, S. and McTaggart, R. 1998 Introduction: the nature of action research. *In*: Kemmis, S. and McTaggart, R. (eds.) The action research planner, 1–13. Deakin University, Victoria, Australia.
- Korten, D.C. 1984 Rural development programming: the learning process approach. *In*: Korten, D. C. and Klauss, R. (eds.) People-centered development: contributions toward theory and planning frameworks, 176–188. Kumarian Press, West Hartford, Connecticut.
- Lawry, S. 1989 Tenure, policy and natural resource management in Sahelian West Africa. Land Tenure Centre, University of Wisconsin, Madison, Wisconsin.
- Maarleveld, M. and Dangbégnon, C. 1998 Managing natural resources in face of evolving conditions: A social learning perspective. Paper presented at the seventh conference of the International Association for the Study of Common Property. Vancouver, Canada, 10–14 June, 1998.
- Mandondo, A. 1997 Trees and spaces as emotion- and norm-laden components of local ecosystems in Nyamaropa communal land, Nyanga District, Zimbabwe. *Agriculture and Human Values* 14: 353–372.
- Mandondo, A. 1998 The concept of territoriality in local natural resource management, and its implications on livelihood in Nyamaropa communal land. WWF Programme Office, Harare.
- Matose, F. 1994 Local people's uses and perceptions of forest resources: an analysis of a state property regime in Zimbabwe. Unpublished MSc thesis. Department of Rural Economy, University of Alberta, Edmonton, Alberta.

- Matzke, G. 1993. Resource Sharing Schemes for state owned land in Zimbabwe: A discussion of conceptual issues needing consideration in the development and planning of co-management regimes. CASS, University of Zimbabwe. Occasional Paper Series number 54/93. Harare.
- McCay, B. J. and Acheson, J. M. 1987 Human ecology of the commons. *In: McCay, J.B. and Acheson, J.M. (eds.) The question of the commons: the culture and ecology of communal resources*, 1–34. University of Arizona Press, Tucson.
- Moore, D. 1993 Contesting the terrain in Zimbabwe's Eastern Highlands: political ecology, ethnography and peasant resource struggles. *Economic Geography* 69 (4): 380–401.
- Murphree, M. W. 1991 Communities as institutions for resource management. Centre for Applied Social Sciences, University of Zimbabwe, Harare.
- North, D. C. 1990 Institutions, institutional change and economic performance. Cambridge University Press, Cambridge, UK.
- Ostrom, E. 1990 *Governing the Commons: the evolution of institutions for collective action*. Cambridge University Press. New York.
- Ostrom, E. 1998 The institutional analysis and development approach. *In: Loehman, E.T. and Kilgour, D. M. (eds.) Designing institutions for environmental and resource management*, 68–90. Edward Elgar, Cheltenham.
- Ostrom, E. 1999 Self-governance and forest resources. Occasional Paper no. 20. Centre for International Forestry Research, Bogor, Indonesia.
- Röling, N. G. and Wagemakers, M.A.E. (eds.) 1998 *Facilitating sustainable agriculture: participatory learning and adaptive management in times of environmental uncertainty*. Cambridge University Press, Cambridge, UK.
- Röling, N.G. and Jiggins, J. 1998 The ecological knowledge system. *In: Röling, N.G. and Wagemakers, M.A.E. (eds.) Facilitating sustainable agriculture: participatory learning and adaptive management in times of environmental uncertainty*, 283–311. Cambridge University Press, Cambridge, UK.
- Sithole, B. 1997 The institutional frameworks for the management and use of natural resources in communal areas of Zimbabwe: village cases of access to and use of dambos from Mutoko and Chiduku. CASS, University of Zimbabwe, Harare.
- Woodhill, J. and Röling, N. G. 1998 The second wing of the eagle: the human dimension in learning our way to more sustainable futures. *In: Röling, N.G. and Wagemakers, M.A.E. (eds.) Facilitating sustainable agriculture: participatory learning and adaptive management in times of environmental uncertainty*, 46–71. Cambridge University Press, Cambridge, UK.