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Compromised Co-management, Compromised Outcomes: Experiences from a Zimbabwean Forest

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Abstract

Zimbabwe embarked on decentralisation of forestry resources after the 'success' of devolved management of wildlife through the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE). This paper examines the outcomes of the introduction of co-management in the Mafungautsi Forest in Zimbabwe. Decentralisation reforms of 1984 introduced new institutional arrangements, which resulted in a shift in the power loci and relationships. However, co-management in the Mafungautsi has not devolved meaningful powers to these new institutions, making them more accountable to the forestry department than they are towards their constituencies. In the Mafungautsi, this has had the result of outcomes counter to those for which the programme was implemented. The results from the Mafungautsi case study in Zimbabwe demonstrate that a decentralisation reform that establishes institutions that are upwardly accountable to the centre will more likely result in negative social, economic, and environmental outcomes.

Résumé

Le Zimbabwe s'est embarqué dans un processus de décentralisation de la gestion de ses forêts après le succès de l'expérience de dévolution des responsabilités de gestion de la faune aux communautés locales à travers le programme CAMPFIRE. Cet article s'intéresse aux résultats de la co-gestion de la forêt de Mafungautsi, au Zimbabwe. La décentralisation à travers la co-gestion a introduit de nouveaux arrangements institutionnels ici, traduits par un déplacement des pouvoirs et des relations interacteurs. Mais à bien observer, la co-gestion en question n'a pas transféré des pouvoirs significatifs aux nouvelles institutions locales (les comités de gestion). Ceux-ci sont donc devenus plus 'redevables' vis-à-vis de l'administration forestière que des communautés locales, dont lesdits comités sont censés pourtant défendre les intérêts. Dans la zone de Mafungautsi, ceci a débouché sur des résultats sociaux, économiques et environnementaux

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négatifs. Après avoir réalisé que la co-gestion et la décentralisation ne répondaient pas à leurs aspirations et à leurs besoins, les communautés locales ont mis en place des mécanismes de résistance pour contrer les pouvoirs de l'administration forestière. Ces mécanismes englobent des feux de brousse, des incendies 'criminels', et le braconnage. Les résultats de Mafungautsi montrent que la décentralisation crée des institutions locales qui rendent davantage compte au gouvernement central, elle enregistre à l'inverse de médiocres résultats au niveau local.

Introduction

'Please' said one chief with a sad twisted smile

'your hacking is stretching for over a mile.

These forests provide us with edible sap, and cow berry fruits;

not to mention the spirits that live in their roots.'

'Never fear', barked McGee, 'our work does no harm.

It's your very own cutting that's cause for alarm.

Why cutting in chaos for your houses and fuel wastes fine wood we could sell in ol' Liverpool.

If you keep using forests for your insatiable needs

how will we ever supply Europe with their needs?'

(Ribot 1997)

Local communities face a profound challenge when confronted by the ostensibly 'scientific' discourse of external extractive commercial timber interests. The forestry industry tends to view 'non-commercial' use of forests by local farmers as destructive—telling local people that they are the source of environmental decline. This article shows how initiatives to involve local communities in conservation through co-management arrangements in Zimbabwe reproduce the outcomes (and tragedy) that the above citation suggests. Despite a discourse of inclusion or 'co-management', governance practice in Zimbabwe reflects the same stance: locals undermine the forest resources with their practices, and thus they cannot be trusted or empowered. Foresters and industry must oversee forest management as a protective measure.

Current environmental management ('co-management') practice in Zimbabwe must be evaluated in the context of the historical shift from fortress approaches to conservation where people and nature are systematically separated to the more-participatory approaches of the past two decades. In

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the first instance people were unapologetically excluded from conservation areas—which often contained the natural resources on which they depended for subsistence. This introduction will explore the historical shift from fortress conservation through participatory approaches to co-management. While the discourse has evolved considerably, the way local populations are treated in practice has not substantively changed.

'Fortress Conservation' and its rationale

'Fortress Conservation' is the use of force backed by legislation to preserve forest resources by excluding people from gazetted areas. Gazetted forest reserves, though called by different names in different contexts, are nonetheless a common scenario in countries with valued forest resources that are considered by central government to be threatened by human activity. In Zimbabwe, the country of focus within this study, 'Protected Areas' have been set aside in terms of the Forest Act of 1996, largely justified by the need to protect ecosystems for reasons including biodiversity conservation. Within Zimbabwe's wildlife sector, such reserved areas are called National Parks according to the National Parks and Wildlife Act of 1975 (amended in 1982).

The 'Tragedy of the Commons' rationale, first advanced in 1968 by Hardin, has since been used to reinforce the Fortress Conservation movement to place communally held natural resources in reserves (Feeny et al. 1990). Hardin (1968) hypothesised that a resource used collectively by a group would quickly be depleted as each individual pursues his or her own personal interest, which would, in turn, destroy the resource. This rationale supports the conclusion that, in the interest of a community and its collective resources, rules and management should be externally enforced, as by a state agency.

Central state actions to designate forests as 'reserved' can have conspicuous consequences towards land management in a country. The Southern African region has an average of 15 percent of its land area under protection. Botswana has an even higher 39 percent of its land reserved (Resource Africa web-site, accessed 2004). Designation of forest reserves is purported to be based upon technical expertise, in the interest of arresting the degradation of vulnerable forest and catchment areas. However, in some countries, gazetting takes place on a rule-of-thumb basis. For instance, in Zambia, the United National Independence Party (UNIP) arbitrarily called for the 15 percent of all land to be set aside as reserved forest in its 1959 Manifesto (Akapelwa 1996), with social and tenure issues perceived as not relevant to address resource sustainability. This sort of action is illustrative of central states' drive to use the fortress conservation discourse to control vast tracts of resources with little accountability to residing communities and their existing land-use practices.

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Recently, states have become aware that these reserved forests are continuing to experience rapid degradation. Financial and human resource outlays allocated to protecting forests have proven prohibitive for already cash-strapped developing country government budgets (Pullan 1988). Moreover, communal farmers alienated from resources they depend upon have tended to destroy the resource under contention. In addition, the Tragedy of the Commons rationale for government intervention in natural resource management has been rejected by many academics on the grounds that communal land is being wrongly treated as an open access resource, rather than as common property (Bromley and Cernea 1989; Repetto and Holmes 1984; Ostrom 1990; Feeny et al. 1990; Murphree 1990, 1991; Runge 1992). An open access resource implies unrestricted access by new users, while a common property resource has collective restrictions against new entrants, and thus the possibility for self-governance. With the discernible failure of state management of natural resources, academics and practitioners are now exploring the possibility of community-based management of natural resources.

Paradigm shift in conservation

At the 1992 Rio de Janeiro Earth Summit, environmental protection objectives were heralded as concurring with economic development objectives through the notion of sustainable development.¹ At this Summit it was further acknowledged that the imposition of fortress conservation had resulted in more failures than successes (Pearce 2003a; Brockington 2002; Hulme and Murphree 2001; Beinhart 1984, 1989). The Rio declaration represented a clear move away from the position adopted by protectionist advocates that natural resources will be squandered if they are not isolated from human activity (for example Grzimek 1960).²

In Africa, there has been a shift away from fortress conservation in the past ten years, towards community-based management. Many regard this movement as the 'new conservation' paradigm (Nhira et al. 1998; Jones 2001; Kangwana and Mako 2001; Sibanda 2001; Matose 2002; Brockington 2002). Hulme and Murphree (2001) indicate that this new approach, while not useful as a panacea for all conservation problems in Africa, provides a framework for developing workable conservation policies and institutions. In Zimbabwe, with the experience of the Communal Areas Programme for Indigenous Resources (CAMPFIRE), communal farmers have been able to prove to the state government that they are capable of sustainably managing their resources when management authority is entrusted with them (Hulme and Murphree 2001).³ In Namibia, the Kunene community-based wildlife management

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programme similarly uses pragmatic approaches to resolve competing interests over land-based resources (Jones 2001).

This new paradigm has seen an increase in the advocacy of community participation in forestry, as well as an expectation that management be carried out by those immediately dependent on the resource. Despite efforts by forestry departments and states to implement participatory management programmes, it is ultimately the balance of power⁴ which determines whether co-management succeeds. Many decentralised forestry management arrangements have resulted in increased responsibility for newly formed local management units and local people, without a corresponding increase in their rights and privileges (Pénélon 1997). This renders some participatory forestry projects a burden to the local level, and such initiatives are refused or passively accepted.

In some instances the donor community has been the main driving force towards change in forestry departments. Initiatives are then implemented as 'projects' and perceived by forestry departments as a passing phase through which donor funds can be accessed.⁵ According to Pénélon (1997) participation is accepted as long as it does not disturb existing power structures. Often this leads to a restricted form of participation, adhering to project frameworks, with a limited life span (Pénélon 1997:ii). Moreover, protectionist values can be embedded in 'scientific' discourse and promoted as fact by those whose interests it serves (Forsyth 2003; Leach and Mearns 1996; Fairhead and Leach 1995, 1996; Beinart 1984, 1989; Scoones 2003; Cousins 1990). As such, 'development' activities can actually serve to entrench government power as was the case in the Thaba Tseka Project in Lesotho (Ferguson 1990).

Devolving forestry through co-management

Co-management is a form of environmental or resource management regime that features partnerships between local communities or resource users and agencies of national governments, which normally possess the legal mandate for environmental protection (Guillet 2002; Young 2002; Jentoft 1989; Pinkerton 1989; Berkes 2002). This management strategy connects local level management with government level management institutions in areas such as fisheries, wildlife, protected areas, forests and other resources (Poffenberger and McGean 1996; Berkes 2002).

Co-management can also be defined as a situation in which two or more social actors negotiate, define and guarantee amongst themselves a fair sharing of the management functions, entitlements and responsibilities for a given territory, area or a set of natural resources (Borrini-Feyerabend et al. 2000; Hobley 1996). Ideally, the state should share responsibilities in decision

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making in a co-management arrangement, rather than posing a milder version of state management (Guillet 2002).

In the case of Mafungautsi, to be described below, it was found that despite changes in discourse to incorporate community involvement in management of forest resources, co-management has not really led to a change in some very specific and key aspects of practice. The institutional arrangements developed through the programme were found to be upwardly accountable to donor, government, and business interests rather than to the community which was supposed to share responsibilities. 'Scientific' knowledge continued to be imposed to justify forest conservation implementation, though it involved questionable practices. Benefits from forest resources to local level users were severely limited, making compliance difficult. Tenure insecurity and local discontent instigated by the programme altered the relationship that forest users had traditionally had with the forests. The continued exclusion of local people from decision-making as well as from benefits of resource exploitation and use has ultimately led to negative programmatic outcomes.

The remainder of the paper examines an attempt to devolve forestry management in Mafungautsi in the Midlands Province of Zimbabwe. The co-management programme in Mafungatusi aimed to improve environmental, social, economic and ecological outcomes of forest management and use. The case of the co-management in Mafungautsi will be presented and evaluated against the policy backdrop of previous approaches.

The research area

The research was conducted in the Mafungautsi area of Gokwe, which falls under the Midlands Province of Zimbabwe. The fieldwork for this research was carried out from 1999 to 2001. The study sites were the two Resource Management Committee (RMC) areas of Batanai and Chemwiro-Masawi.

The Mafungautsi State Forest is one of 24 gazetted forests in Zimbabwe. It comprises 82,000 hectares and has deep Kalahari sands. The soils are of good quality for farming in the initial years of opening up the land, but they quickly decline in fertility in subsequent years, requiring the application of increasing quantities of fertiliser and manure. Unable to afford the escalating cost of artificial fertilisers, local farmers are left with little choice but to open new tracts of land as fertility declines in older fields (makura) (Manyame pers. comm.; GRSMP 1994).6

The interest of local farmers residing in the surrounding communities to acquire forest land for cultivation underlies their struggle with the Forest Commission of Zimbabwe (FCZ), the state agency responsible for forest management. In 1954, 101,900 hectares were gazetted to create the

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Mafungautsi State Forest. This process entailed the displacement of villagers residing within its area. Village heads were moved out of the forest against their will. During the liberation war in the 1970s, concessions were made to neighbouring communities in that a 22,000 hectare area of the forest was degazetted in 1972. The Batanai people were moved from their original jurisdiction under Chief Njelele to that of the Nemangwe Chieftanship in this new area. The many who were displaced did not accept this action, believing the FCZ to have stolen their land. Others, besides the Batanai residents who had been previously evicted from the Mafugautsi Forest, also settled in this de-gazetted area.

Zimbabwe achieved independence in 1980, and a great deal of political unrest ensued in some districts, leaving the government with few resources to allocate to enforcement. Some members of the surrounding communities re-settled in the Mafungautsi. However, in 1986, the FCZ camp in the Mafungautsi was burned down, and the FCZ responded to this dissident activity: all settlers were forcibly evicted by the Zimbabwe National Army. Thereafter, the enforcement became very stringent. In 1990, the Forest Protection Unit, an armed unit of the FCZ, was introduced to strictly enforce forest reserve regulations, with the power to arrest. Nonetheless, local communities have retained a sense of legitimacy of their history of land occupation and their need for forest products for their livelihoods (Baker 1997).

In 1985, Zimbabwe enunciated a multiple land use policy for indigenous forests. The FCZ tried to implement this policy to accommodate local communities by allowing for certain land use demands, such as grazing and thatch collection. At one point, they allowed families to reside within the forest through a system of permits. However, in the interest of maintaining the number of permit holders, their offspring could not reside there, and this dilemma has posed a problem for implementation. The FCZ staff have nonetheless remained very cognisant of the need to resolve conflict and to allow for further opportunity to implement the multiple land use (Baker 1997). They would encourage a programme to help them achieve both of these objectives.

It has additionally been clear to the Zimbabwean government that they cannot financially support enforcement of fortress conservation. In the 2002/2003 national budget of Zimbabwe, the Ministry of Environment and Tourism, under which FCZ falls, received the second smallest budget allocation of Z\$2,494 billion out of a total budget of Z\$78,241 billion.¹⁰

Recently the activities of the FCZ were streamlined in a bid to improve its financial position in the face of declining central government revenue

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allocation. Policy toward a co-management initiative was developed at FCZ's head office, with pilot implementation to take place at field level—in the Mafungautsi. This pilot programme was to be implemented through the FCZ, and enabled the creation of Resource Management Committees (RMCs), which were to serve as bodies of locally elected representatives who would pass on the grievances from local level in a bottom up approach. The pilot project arrangement was to inform what could be the basis of future sustainable forest management arrangements in Zimbabwe.

It should be noted as a backdrop, that informing co-management's overall implementation and outcome, is Zimbabwe's decentralisation reform. Zimbabwe embarked on the decentralisation of governance with the Prime Minister's Directive of 1984. As previously discussed, central government actors in forest management include the Forest Commission of Zimbabwe (FCZ) and its armed unit, the Forest Protection Unit (FPU). The Rural District Council (RDC) is the local authority composed of 20 or more Ward Development Committees (WARDCO), which are in turn composed of Village Development Committees (VIDCO). VIDCOs make up the lowest administrative unit in smallholder farming areas. Members of a WARDCO choose a councillor to represent their ward in the RDC.¹¹ The Resource Management Committees were created in the mid-1990s with the FCZ's introduction of co-management arrangements in rural communities surrounding forests.

The RMCs were created to serve as the link between FCZ and the local people in their 'co-management' venture, with the FCZ holding oversight responsibilities. Resource Management Committees in both Batanai and Chemwiro-Masawi¹² were established in 1997. The FCZ organised the meetings to elect seven RMC members: the chairman, vice-chairman, treasurer, secretary and three committee members. The committees were to serve as the link between FCZ and the local people in their 'co-management' venture. As such, co-management was viewed as a way of democratising forestry management. Both RMCs were to acquire revenue from the selling of thatching grass, broom grass and reeds. Firewood was to be collected with the assistance of the Forest Protection Unit (FPU), situated within the forest.

The Canadian International Development Agency (CIDA) provided the resources for the decentralisation process, amounting to over Z\$12 million, serving as a driving force for the development of co-management in Zimbabwe. Most of the resources were channelled to the state forestry department with communities expected to benefit indirectly through initiatives such as the training of some of the RMC members. Most of the resources from CIDA sought to strengthen the FCZ, through the purchase of equipment

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(vehicles, camping gear) and the improvement of the FPU camp at Lutope within the Mafungautsi forest.

Research findings

Establishment and operation of resource management committees

The formation process for both Batanai and Chemwiro-Masawi RMCs was clearly driven by the FCZ, which is responsible for both overseeing and endorsing RMC elections. Both RMCs were created at the beginning of the implementation process, and in both instances, the FCZ had the power to set up the rules of co-management. For instance, the FCZ directly influenced the electoral process for the RMCs. The community members of Chemwiro-Masawi tried to challenge the FCZ's choice of the RMC's composition by passing of a 'vote of no confidence'. This, however, was nullified by the FCZ on the basis that it was necessary to retain the trained RMC members, regardless of their inefficiency. In Batanai, the FCZ approved a committee with political elites who, at a later point, misused the RMC funds. The FCZ also eventually sidelined a female member they deemed counterproductive to their objectives by manipulating the number of votes that she received. This close level of control over RMC makeup had the additional result of entrenching accountability of these new organisations upward to the FCZ.

Once formed, there was further evidence of the influence of the FCZ upon the RMC's activities. As a general point, RMC members do not understand the contents of their respective constitutions and operational frameworks. The RMC constitutions and operational frameworks were prepared in English. English is not understood by most people of Batanai and Chemwiro-Masawi, who reside in an area with some of the lowest literacy levels in Zimbabwe (CSO 1994; GSRMP 1994). In both RMCs, as was the case with all RMCs created through the co-management project, the constitution was adopted without any amendment to alter the mandate of the FCZ towards its management of the forest.

With their operational framework prepared in English, rules are also beyond RMC members' comprehension. Both RMCs seem to rely upon the FCZ to organise meetings, and the FCZ is responsible for recording the official minutes at these meetings. In the event that RMC members would want to hold their own meetings, any decisions with potential impact on forest resources required the FCZ's endorsement. The RMCs are not legal entities, and as such cannot represent their constituencies in a manner independent of FCZ interests.

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Powers that the RMCs have include granting permits for collecting thatch and broom grass in selected areas of the forest reserve, as well as encouraging tree planting in smallholder areas. They work closely with the FPU to fight fires within the forest reserve, and have also assumed roles of enforcement. Consequently, they are perceived by community members as a complement to the FPU. Some RMCs have even begun to request FPU uniforms and allowances for their equivalent services. This further speaks to the RMC's sense of accountability to the FCZ and its objectives, rather than to those of the communities they are supposed to represent in a co-management arrangement.

Access to financial resources

The decentralisation attempts in Zimbabwe, through the Prime Minister's Directive of 1984, appear to have been superficial in that decentralisation has been carried out to the RDC level, without real benefits trickling down to the lowest tier of governance, the village level. Revenue collection, except for very low local rates, has largely remained centralised. Most RDCs still receive more than 90 percent of their revenue from central government as tied grants—which effectively means that the central government decides the amount of resources the RDCs receive and how it must be spent. Thus, the responsibilities that the central government has devolved are in fact burdens to local authorities, as they do not beget matching resources to feasibly provide the devolved services.

With respect to co-management project in the Mafungautsi, specifically, of the over Z\$12 million budget from CIDA, Z\$8,246,422 was expended on operational costs and Z\$4,606,243 on capital costs, totalling Z\$12,852,665. Most of this expenditure directly benefited the FCZ's FPU arm through the purchase of vehicles, office equipment, FPU houses at Lutope, lodges, and camping equipment. The RMCs, on the other hand, directly received less than one percent of the total co-management budget.

As further illustration of the perceived disconnection between the financial objectives of the local level and those of the FCZ in the co-management project, prior to the establishment of the RMCs, the FCZ provided opportunities for traditional and RDC leaders from the Mafungautsi to fly in a chartered plane over the gazetted forest and the communal areas so that they could witness, first-hand, the difference between land cover in both resource regimes. From the village-level point of view, these were resources that could have been put to better use. People on the ground could easily discern that there was more tree cover in the gazetted forests than the communal areas, as demonstrated by participatory mapping exercises in Batanai and Chemwiro-Masawi RMCs. Community members viewed such

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flights using funds allocated for the co-management project as bribes for local leaders to adopt co-management on FCZ terms.

Co-management activities

The co-management pilot initiative seeks to allow for and regulate specified community activities within specified area reserved forest, working hand-in-hand with communities. In the following section, findings concerning several activities conducted in the Mafungautsi Forest are illustrated.

Bee-keeping within Mafungautsi

The people of Chemwiro-Masawi were permitted to set up a bee-keeping project at the edge of the Mafungautsi Forest. The project, however, was coopted by ten business people, most of whom did not reside in either Chemwiro or Masawi. They invited the RMC chairperson to become an eleventh member of their business. The community members of Chemwiro-Masawi regarded their RMC chairperson's cooperation with the business group as a betrayal of their interests and trust. The group of business people had a further vision of starting a dairy project within the Mafungautsi Forest. However, though the community disagreed with the business people's interests and no longer had a sense of ownership for these activities, they did not want to spend their resources buying out shares of the businesses to take back control of their operations. They felt their resources could be used for better purposes.

Access to firewood

While the issue of firewood has been important for both areas, firewood shortages are far more pronounced in the Batanai than the Chemwiro-Masawi area. Batanai is inhabited by a number of people who were relocated from the Mafungautsi Forest and forced into a small part of the Batanai area, with the result of more people occupying small pieces of land. Chemwiro-Masawi has had no such influx of migration. People living in the Chemwiro-Masawi area also are closer to the Small Scale Commercial Farming area, reasonably endowed with trees, from where they have been able to obtain firewood. There has also been much more vegetative cover within Chemwiro-Masawi RMC than Batanai RMC area (Mapedza, Wright and Fawcett 2003). These differences notwithstanding, in both communities, even with co-management, people have continued to collect firewood 'illegally'. The co-management arrangement was designed to keep firewood collection to a minimum, and this designated level has turned out to be far under household demand. Even RMC members were allegedly involved in the 'illegal' or 'unsupervised' firewood collection.

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Commercial timber logging

The Communal Lands Forest Produce Act of 1987 stipulates that the proceeds from commercial timber logging go to the RDC, with FCZ receiving a supervisory fee. Commercial timber logging activities, which are not common in reserve areas, do happen to take place in the communal area of Chemwiro-Masawi. The co-management initiative thus created a window of opportunity for the local community to claim proceeds from timber logging on the grounds that co-management was supposed to involve joint management and ownership. The community contended that they should be equal partners in deriving benefits from timber, rather than being restricted to such peripheral benefits as thatch and broom grass. 14 This debate ensued between the RDC and the community. The community was represented by the traditional village head in the case, who had been the secretary to the late Chief Njelele, and was a member of the Zimbabwe Farmers Union (ZFU)'s provincial committee, and was plugged into an international network of farmer's organisations. 15 Through his efforts, the community successfully negotiated that the RDC pay a portion of its proceeds in the form of school furniture to the community.¹⁶

FCZ discourse versus outcome

The FCZ adopted a discourse of local participation and empowerment in order to appeal to the donor community and successfully secure funding to initiate the programme. However, it has clearly not been operationalised as expected, and this has been recognised in CIDA's mid-term evaluation (Roper and Maramba 2000).

Discussions with the FCZ itself have revealed that the co-management initiative has been primarily focused upon ecological conservation. FCZ staff, in initiating the project, believed that the objective of co-management was to conserve trees and natural resources in the forest, and that the communities should accept the 'gospel' that they were preaching. A respondent in the Chemwiro-Masawi RMC area, discussing the role of the RMC, said: 'RMCs are dying a natural death because the power was given to the RMCs and not the ordinary community people'.

At the beginning of the project's implementation, the first field officer responsible for implementing co-management said:

The Forestry Commission controls the forest area and will continue doing so after the implementation of the project. It will maintain the role designated to them by the government... co-management is meant to minimise conflicts between the Commission and the communities, which normally lead to the destruction of natural resources.¹⁷

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Co-management of forestry resources in Mafungautsi was not considered to be an arrangement to be negotiated, but a new means of forwarding conservation objectives that would allow for conflict management. The FCZ did not appear to consider the values and beliefs of the local partners in comanagement. What is particularly remarkable about the initiative in Mafungautsi is how the social and economic considerations of the local actors in the area were often seen as what Hobart calls the 'obstacles to rational progress' (Hobart 1993). The FCZ sought to use co-management to convince the people that destroying natural resources was illegal, citing sections of the Forest Act Chapter 19:05 of 1996, Communal Lands Forest Produce Act of 1987, and the Natural Resources Act 20:13 of 1996. Moreover, their explanations, conducted using English terms, were not understood, as the post-meeting interviews showed.¹⁸

Fundamentally, though the FCZ used the term 'shared forest management' as co-management's objective, in reality they sought to implement 'shared forest access' (Roper and Maramba 2000; Palit 1994; Shah 1995; Banerjee 1996). There was no management role delineated for the communities. Management of the forest, it was argued, was still a preserve of the FCZ. The rural communities were compared to children in a household who were said to have no say in how the head of the household runs it—and probably one could add or mis-runs it.¹⁹

Negative environmental consequences

Ultimately, the co-management initiatives carried out in Gokwe South RDC have led to negative environmental outcomes, as demonstrated in both Batanai and Chemwiro-Masawi RMCs. Having come to realise that co-management was not meeting their needs, the local actors have resolved to use the varying weapons at their disposal to counter the powers of the forest department, including forest arson and increased poaching. Poaching for both trees and wildlife appeared to be on the increase. Forest fires increased despite co-management. Stealing from the forest was condoned even by traditional leaders who felt that people stealing from 'Mugabe's Forest' were reclaiming their own resources.

Additionally, the co-management initiative contributed to the perception among local users that where the forest reserve boundary began was where their traditional conservation norms and practices ended. In the reserved forest, which was not controlled by the villagers through traditional leaders, traditional management rules were not considered applicable. Local people felt it was justifiable to destroy trees in the forest rather than in the village woodlands. The use of snares was often considered to be a dangerous strategy

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as it harmed livestock, but the practice was all the same considered acceptable in the reserved forest.

With this background of a sense of discontent for FCZ policies were the raised hopes that communities had upon co-management's adoption that it would help them move back to their 'old homes' in Mafungautsi. As the results of co-management came to differ from these expectations, communities responded. A delegation sent to the Forest Minister by Headman Ndhlalambi of the Batanai people was told that moving back into the gazetted area was not possible. They were advised to register under the government's resettlement programme.²⁰ More recently, the Chemwiro-Masawi RMC Chairman claimed there was a need for a few people to be allowed to settle in the forest to monitor illegal activities from within it.²¹ He argued that there were very productive pockets of soil within the forest area. Such actions were an attempt to address the strong interest of displaced communities to return to the forest.

By August 2001, forty-nine households had settled in Mafungautsi Forest with a total of 180 households said to have 'registered' with the new Mafungautsi village head. Interviews with those who had moved into Mafungautsi demonstrated their tenure insecurity, as they were aware of previous waves of evictions from that forest. Most of them indicated that their reason for settling in the forest was that they were previously evicted and needed to return to 'their old homes'. This movement indicates a new level of local level response to the 'land invasions' enunciated at national level (Moyo 2000; Marongwe 2002). This process of resettlement will likely accelerate the extraction of forest products, as fields for farming are opened up under conditions of tenurial uncertainty. The historical land tenure issue in Zimbabwe is complex, and arguably beyond the remit of FCZ alone. The high level of demand on the part of communities to settle back in the forest speaks to co-management's failure to achieve its objectives.

Apart from local communities serving as a threat to ecological health with their discontent with FCZ policies, weakened custodial relationships with the forest, and tenure insecurity; perverse incentives for the RDC have additionally contributed to forest degradation. In Gokwe, the concessionaires in most instances admitted to cutting well above their quotas due to poor monitoring by the RDC and FCZ. Forestry industry activities involve a perverse incentive for the financially starved RDCs to allow for more trees to be cut, as it allows them to obtain more revenue. The logic and argument that self-interested local communities will deplete forest resources if these resources are not protected appears to equally apply to the RDCs, who, though supposedly 'more enlightened' toward protecting forest and natural resources,

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have strong incentives to pursue their economic interests as well. Moreover, the local communities—the very people considered by the government to attach little or no importance to trees and forests—have surprisingly resisted further actions by the RDCs to cut down trees in communal areas.

In the Mafungautsi, the FCZ has promoted an initiative to cut down indigenous trees within the gazetted forests and replace them with eucalyptus species near the Lutope FPU Camp. This initiative threatens the bio-diversity of the indigenous forests given that mono-cultural practices expose the entire forest to disease outbreaks (Shiva 1993). This raises questions concerning the premises of FCZ knowledge, which is claimed to be for the good of the forests. Such activity is illustrative of a bias towards the 'western science and knowledge'. Some of this bias seems to be commercially driven at the expense of espoused values such as bio-diversity.

Although the new conservation, with its promise of community inclusiveness in natural resource management, is a welcome development, without proper attention to local values, beliefs, and needs, forests have in many cases become battlegrounds in which state interests wrestle the indigenous or local interests. Moreover, the current conservation achievements in reserved areas have involved significant amounts of resources to enforce gazetted forest boundaries. Thus, while it is true that aerial images of the Mafungautsi Forest show that the reserved forest area has more vegetative cover than the communal areas (Mapedza et al. 2003), the fact remains that it is possible to develop a management regime that further enhances the benefits of both the ecosystem and the human population than is currently the case under co-management.

Analysis and policy implications

Devolving forestry management in Mafungautsi is a serious challenge. There are profound rifts between discourse and practice. The Forest Commission of Zimbabwe (FCZ) is simultaneously a player, referee and coach in the Mafungautsi co-management arrangement, contradicting its supposed coequal partnership status. Such imbalanced institutional arrangements make co-management unsustainable. The presumption of a co-equality status for participating communities is further contradicted by the non-negotiable roles that FCZ plays in management and policing, and by their staff's professional training (Palit 1993, 1994; Schug 2000; Sundar 2000, for the Indian case).

In both Batanai and Chemwiro-Masawi, the Resource Management Committees are more accountable to the FCZ than they are to their constituency. For any co-management attempt to succeed there must be a balance of powers and a downwardly accountable arrangement. Such

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arrangements could help transform community interests into actions that benefit them.

Local communities should benefit from co-management

Murphree (1990) argues that it is through the demonstration of benefits that communities are willing to incur management costs. These costs have to be clearly linked to the benefits. This does not seem to be the case in Mafungautsi. Unfortunately, the socio-economic benefits to the participating communities are not central to the Project's goal and objective (Roper and Maramba 2000). Roper and Maramba (2000) question whether there are sufficient economic benefits for communities to want to assume co-management responsibilities. They point out that where forests have limited economic potential, economic diversification is necessary to lessen dependence upon stressed forest resources.

Community-based forest management conceptually embraces the notion that forests should serve people and that the rural population should have a formal role to play in forest management. However, in Zimbabwe, comanagement seems to have been conceived under a similar set of beliefs as those that underlie fortress conservation. The FCZ accepted the opportunity to develop the programme and obtain funds from the Canadian International Development Agency at a time when its financial resources were dwindling. The FCZ and district forestry bodies have half-heartedly implemented 'devolved' management, using the language of decentralisation, without meaningfully shifting the power loci to local communities.

Revisiting the 'Forest Reserve' concept

The co-management of forestry resources was a measure intended to drive down the pressure and demand for the gazetted land from the local communities in the Mafungautsi area. Resource governance at a local level, it was reasoned, would perform a legitimating role for the state property regime without making concessions on the control and ownership of the forest. This approach seems to have failed, as local communities continue to demand to settle in the forest area. This implies that there is need to review the approach of the reserved or gazetted forest altogether. Most of these forests were set up using vague 'rule of the thumb' guidelines and faulty 'science', overlooking the needs of the local communities whose livelihoods heavily depended on the forests. Innovative approaches in the management of forestry resources are needed that are based upon genuine negotiation and

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a willingness to accommodate the demands and the experiences of the local communities whose livelihoods depend on forestry resources and land.

Co-management enabling legal framework

The decentralisation attempts in Zimbabwe seem to have been nominal, as they have been carried out merely to the RDC level. Moreover, decentralisation to this level has only been decentralisation of burdens in response to the austerity measures international financiers have placed on the Zimbabwean government (Wekwete and de Valk 1990; Makumbe 1998; Conyers 1990, 2001, 2003). There is a need to recognise the lower tiers as legal entities at the very least in order to empower them to make decisions, which in turn promotes downward accountability.

The reconfiguration of forestry knowledge and science

The apparent bias towards 'Western science and knowledge' on the part of forestry is commercially driven, with little attention to the bio-diversity objectives. For co-management to be carried forward effectively there needs to be an appreciation for traditional knowledge and methods to manage forests they have historically relied upon for their livelihoods, and an appreciation for their incentives to practice these management measures. It is important to avoid creating conditions that contribute to the view that the forest belongs to the government, relieving them of responsibility to take care of shared resources.

Conclusion

This article brings into question the notion of co-management as a means of decentralising control of natural resources to local people. In the Mafungautsi case, co-management was constituted by unequal relations between parties (the local people and the government agencies), a failure to link benefits to conservation activities, the imposition of outside 'knowledge' on local people and on their priorities, and a bias toward western science and knowledge. The fact that this imposition and bias persisted reflects the degree to which the programme's activities were pre-determined and imposed from above, as well as the degree to which the programme promoted accountability upward to the administration rather than downward to the needs of local people.

The case of Mafungautsi area of Zimbabwe illustrates how co-management constituted by upwardly accountable institutions is not likely to result in a sustainable management regime for natural resources such as forests. Upwardly accountable institutions do not build trust and may not resolve conflicts between the state and the local communities (Singleton 1998; Berkes 2002). Compromised co-management efforts, intending to offer marginal

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changes while largely maintaining the status quo, are more likely to result in compromised outcomes.

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Notes

- 1. This thinking was further reinforced at the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002.
- 2. Williams (2003) traces this so called 'impending ecological disaster' perspective—attributed to the over-consumption of natural resources such as forestry—to the time of Plato, who noted that trees were disappearing in his native country of Greece. Williams also cites Cicero's essay of 43 BC as further evidence of the negative human impact on the environment. Soil erosion has also been cited as a cause for the decay of the Roman Empire.
- 3. It must be noted, however, that the CAMPFIRE programme has failed to decentralise powers to the local level institutions in some cases (Murombedzi 1994; Mandondo 2000; Alexander and McGregor 1996, 2000; see also Bazaara 2006).
- 4. Power is a key aspect in the study of natural resource management as it helps shape the relations of production (Moore 1993).
- 5. Murphree (2004) argues that a 'project' approach towards natural resource management is not conducive for sustainable resource management.
- Currently inflation is said to be at 1193.5 percent. The level of inflation has made it difficult to acquire agricultural inputs (Reserve Bank of Zimbabwe website 29 June 2006).
- 7. Headman Ndhlalambi, pers. comm.
- 8. In the early 1980s, the state was attempting to suppress the second largest ethnic group in Zimbabwe (the Ndebele) in order to create a one-party state.

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- 9. Such violent conflict by the state is reminiscent of the events that have taken place in Lake Mburo National Park in Uganda (Hulme and Infield 2001) and Tarangire National Park in Tanzania (Kangwana and Mako 2001).
- 10. The official exchange rate is US\$1=Z\$101195 or £1=Z\$185127. However, due to the shortage of foreign currency, rates are said to be operational at twenty times the official rate on the parallel market (Reserve Bank of Zimbabwe website).
- 11. Zimbabwe is divided into 57 RDCs, which do not cover urban areas. They are covered by Town Boards (small towns) or Municipalities (cities).
- 12. Chemwiro and Masawi are two Village Development Committees that make up one RMC.
- 13. This was likely one of the reasons why the community passed a vote of no confidence for their RMC, which was overturned by the FCZ, as previously mentioned.
- 14. The interest in benefiting from commercial timber logging was also raised in Ngomeni and Muyambi Wards during the 1993 Ward Workshops. The people pointed out that the Arusha Timber Company, another concessionary company that operated in Gokwe earlier on, should not have benefited alone from the concessions, as the community felt it was entitled to the benefits.
- 15. He had had the opportunity to visit Sweden as part of a group of farmers to assess the operations of farmers' organisations in other countries.
- 16. It should be noted, however, that there was no commitment made by the RDC as to when and how the payment would be made. Debt collectors had to be sent after the RDC for payment.
- 17. Citation obtained from C. Nhira's field notes.
- 18. Author interviews, 15 March 2001.
- 19. Author interview, 13 February 2001.
- 20. This had taken place when the government was still involved in its first phase of re-settlement, and not the current fast track land resettlement programme.
- 21. Moyo, pers. comm.

References

- Akapelwa, J.S., 1996, 'National Report on the Forestry Policy of Zambia', *FAO Forestry* 132, Rome, FAO.
- Alexander, J. and McGregor, J., 1996, "Our sons didn't die for animals": Attitudes to Wildlife and the Politics of Development: CAMPFIRE in Nkayi and Lupane Districts', Paper presented at the international conference on the Historical Dimensions of Democracy and Human Rights in Zimbabwe, 9-14 September, Harare, Zimbabwe.
- Alexander, J. and McGregor, J., 2000, 'Wildlife and Politics: CAMPFIRE in Zimbabwe', *Development and Change*, Vol. 31, No. 3, pp. 605-627.

6.mapedza.p65 141 25/08/2006, 12:16

- Baker, S., 1997, 'Development of the Resource Sharing Concept in Zimbabwe', Paper presented at the Mafungabusi Resource Sharing National Seminar, Kadoma Ranch Motel, 9-11 April, Kadoma, Zimbabwe.
- Banerjee, A. K., 1996, 'Some observations on community forestry', *Wastelands News*, Vol. 11, pp. 43-48.
- Bazaara, N., 2002, 'From Despotic to Democratic Decentralisation in Uganda: A History of Accountability and Control over Nature', Paper presented at the Centre for Basic Research Seminar, 25 October, Kampala, Uganda.
- Bazarra, N., 2006, 'Subjecting Nature to Central Authority: The Struggle over Public Goods in the Formation of Citizenship', *Africa Development*, Vol. XXXI, No. 2.
- Beckerman, W., 1995, Small Is Stupid, London, Duckworth.
- Beinhart, W., 1984, 'Soil Erosion, Conservation and Ideas about Development: A Southern African Exploration 1900-1960', *Journal of Southern African Studies*, Vol. 11, No. 1, pp. 52-83.
- Beinhart, W., 1989, 'The Politics of Colonial Conservation', *Journal of Southern African Studies*, Vol. 15, No.2, pp. 143-162.
- Berkes, F., 2002, 'Cross-Scale Institutional Linkages: Perspectives from the Bottom Up', in T. Dietz, N. Dolsak, E. Ostrom and P.C. Stern, eds., *The Drama of the Commons*, Washington, National Research Council, pp. 293-321.
- Borrini-Feyerbend, G., Farvar, M.T., Nguinguri, J.C., and Ndangang, A.V., 2000, Co-management of Natural Resources: Organising, Negotiating and Learningby-doing, Yaoundé, GTZ and IUCN.
- Brockington, D., 2002, Fortress Conservation: The Preservation of the Mkomazi Game Reserve, Tanzania, Oxford, James Currey.
- Bromley, D. and Cernia, M., 1989, *The Management of Common Property Natural Resources and some Conceptual Fallacies*, Washington, World Bank.
- Central Statistical Office (CSO), 1994, *Census 1992: Provincial Profile: Midlands*, Harare, CSO.
- Conyers, D., 1990, 'Decentralisation and Development Planning: A Comparative Perspective', in K.H. Wekwete and P. de Valk, eds., *Decentralising for Participatory Planning: Comparing the Experiences of Zimbabwe and other Anglophone Countries in Eastern and Southern Africa*, Aldershot, Avebury Press
- Conyers, D., 2001, 'Whose Elephants Are They? Decentralisation of Control over Wildlife Management through the CAMPFIRE Programme in Binga District, Zimbabwe', Environmental Governance in Africa Programme, Washington, WRI.
- Conyers, D., 2003, 'Decentralisation in Zimbabwe: A local perspective', *Public Administration and Development*, Vol. 23, pp. 115-124.
- Fairhead, J. and Leach, M., 1995, 'False Forestry History, Complicit Social Analysis: Rethinking Some West African Environmental Narratives', World Development, Vol. 23, No. 6, pp. 1023-1035.

6.mapedza.p65 142 25/08/2006, 12:16

- Fairhead, J. and Leach, M., 1996, 'Rethinking the Forest-Savanna Mosaic: Colonial Science and its Relics in West Africa', in M. Leach, and R. Mearns, eds., *The Lie of the Land: Challenging Received Wisdom on the African Environment*, Oxford, James Currey, pp. 105-121.
- Feeny, D., Berkes, F., McCay, B.J., and Acheson, J.M., 1990, 'The Tragedy of the Commons: Twenty-two years later', *Human Ecology,* Vol. 18, No. 1, pp. 1-19.
- Ferguson, J., 1990, *The Anti-Politics Machine*, Minneapolis, University of Minnesota Press.
- Forsyth, T., 2003, *Critical Political Ecology: The Politics of Environmental Science*, London, Routledge.
- Goodman, G., 1985, 'Energy and Development: Where Do We Go From Here?', *Ambio*, Vol. 14, pp. 186-89.
- Grzimek, B., 1960, Serengeti Shall not Die, London, Hamish Hamilton.
- GSRMP, 1994, 'Gokwe South Rural Mater Plan', Gokwe, Gokwe South Rural District Council.
- Guillet, D., 2002, 'Co-Management of Natural Resources: The Long View from Northwestern Spain', *Environment and History*, Vol. 8, No. 2, pp. 217-236.
- Hanley, N. and Atkinson, G., 2003, 'Economics and Sustainable Development', in F. Berkhout, M. Leach, and I. Scoones, eds., Negotiating Environmental Change, Cheltenham, Edward Elgar.
- Hardin, G., 1968, 'The Tragedy of the Commons', *Science*, Vol. 162, No. 13, pp. 1243-48.
- Hobart, M., 1993, *An Anthropological Critique of Development: The Growth of Ignorance*, London, Routledge.
- Hobley, M., 1996, *Participatory Forestry: The Process of Change in India and Nepal*, London, ODI (Overseas Development Institute).
- Hulme, D. and Infield, M., 2001, 'Community Conservation, reciprocity and parkspeople relationship, Lake Mburo National Park, Uganda', in D. Hulme, and M. Murphree, eds., *African Wildlife and Livelihoods*, Oxford, James Currey, pp. 106-130.
- Hulme, D. and Murphree, M., eds., 2001, *African Wildlife and Livelihoods: The Promise and Performance of Community Conservation*, Oxford, James Currey.
- Jentoft, S., 1989, 'Fisheries co-management', *Marine Policy*, Vol. 13, pp. 137-54.
- Jones, B., 2001, 'The Evolution of a Community-based Approach to Wildlife Management at Kunene, Namibia', in D. Hulme and M. Murphree, eds., *African Wildlife and Livelihoods*, Oxford, James Currey, pp. 160-76.
- Kangwana, K. and Mako, R. O., 2001, 'Conservation, Livelihoods and the Intrinsic Value of Wildlife: Tarangare National Park, Tanzania', in D. Hulme and Murphree, M., eds., *African Wildlife and Livelihoods*, Oxford, James Currey, pp. 148-59.
- Leach, M. and Mearns, R., 1996, *The Lie of the Land: Challenging Received Wisdom on the African Environment*, Oxford, James Currey.

6.mapedza.p65 143 25/08/2006, 12:16

- Livingstone, D., 2003. 'Environmental thinking and metaphors of nature', Paper presented at the Caring for Nature: Sources and Conflicts of Modern Environmentalism, organised by the British Academy, 3 November, 10 Carlton House Terrace, London.
- Makumbe, M.J., 1998, *Democracy and Development in Zimbabwe: Constraints of Decentralisation*, Harare, Sapes Books.
- Mandondo, A., 2000, 'Forging (Un)democratic Resource Governance Systems from the Relic of Zimbabwe's Colonial Past', Institute of Environmental Studies, University of Zimbabwe and Centre for International Forestry Research. mimeo, Harare, Zimbabwe.
- Mapedza, E., Wright, J. and Fawcett, R., 2003, 'An Investigation of Land Cover Change in Mafungautsi Forest, Zimbabwe, using GIS and participatory mapping', *Journal of Applied Geography*, Vol. 23, pp. 1-21.
- Marongwe, N., 2002, 'Conflicts over Land and other Natural Resources in Zimbabwe', Research Report, Harare, ZERO.
- Matose, F.M., 2002, 'Local People and Reserved Forests in Zimbabwe: What Prospects for Co-management?', PhD thesis, University of Sussex.
- Moore, D.S., 1993, 'Contesting Terrain in Zimbabwe's Eastern Highlands: Political ecology, ethnography and peasant resource struggles', *Economic Geography*, Vol. 69, No. 4, pp. 380-401.
- Moyo, S., 2000, 'The Political Economy of Land Acquisition and Redistribution in Zimbabwe, 1990-1999', *Journal of Southern African Studies*, Vol. 26, No. 1, pp. 5-28.
- Murombedzi, J.C., 1994, 'The Dynamics of Conflict in Environmental Management Policy in the Context of the Communal Areas Management Programme for Indigenous Resources (CAMPFIRE)', PhD thesis, Harare, University of Zimbabwe.
- Murphree, M.W., 2004, 'Communal approaches to natural resource management in Africa: From Whence to Where?', Paper presented at the Breslauer Symposium on Natural Resource Issues in *Africa*, 5 March, Berkeley, University of California.
- Murphree, M.W., 1990, 'Decentralising the Proprietorship of Wildlife Resources in Zimbabwe's Communal Areas', mimeo, Harare, Centre for Applied Social Sciences (CASS), University of Zimbabwe.
- Murphree, M.W., 1991, 'Communities as Institutions for Resource Management', mimeo, CASS, Harare, University of Zimbabwe.
- Nhira, C., Baker, S., Gondo, P., Mangono, J.J., and Marunda, C., 1998, *Zimbabwe Country Study: Contesting inequality in access to forests*, London, IEED.
- Ostrom, E., 1990, Governing the Commons: The Evolution of Institutions for Collective Action, Cambridge, Cambridge University Press.
- Palit, S.,1993, *The Future of Indian Forest Management: into the Twenty-first Century,* New Delhi, Society for the Prevention of Wasteland Development and Ford Foundation.

6.mapedza.p65 144 25/08/2006, 12:16

- Palit, S.,1994, 'Forest Education and Training Needs', *Vacham*, Vol. 5, pp. 18-25
- Pearce, Fred, 2003, 'A Greyer Shade of Green', *New Scientist*, Vol. 178, Issue 2400-21, pp. 40-42.
- Pénélon, A., 1997, Community Forestry: It May Indeed Be a New Management Tool, But Is it Accessible? Two Case Studies in Eastern Cameroon, London, IIED.
- Pinkerton, E., 1989, *Co-operative Management of Local Fisheries*, Vancouver, University of British Columbia Press.
- Poffenberger, M. and McGean, B., 1996, *Village Voices, Forest Choices: Joint Forest Management in India*, Delhi, Oxford University Press.
- Pullan, R.A., 1988, 'Conservation and the Development of National Parks in the Humid Tropics of Africa', *Journal of Biogeography*, Vol. 15, pp. 171-83.
- Pye-Smith, Charlie, 2003, 'Fruits of the Forest', *New Scientist*, Vol. 179, Issue 2404-19, pp. 36.
- Reserve Bank of Zimbabwe, 2006, 'Inflation Rate May 2006', available online www.rbz.co.zw accessed on 29 June 2006.
- Resource Africa, undated, 'Beyond Protected Areas, people, Parks and Progress in Southern Africa', Resource Africa Fact Sheet No. 8, available on line www.resourceafrica.org/documents/facts/f08.pdf accessed on 28 January 2004.
- Repetto, R. and Holmes, T., 1984, 'The Role of Population in Resource Depletion in Developing Countries', *Population and Development Review*, Vol. 9, No. 4, pp. 609-631.
- Ribot, J.C., 1997, 'An "Ode to the Lorax": The Business of Sustainable Development, An African Forest Tale', *Africa Today*, Vol. 44, No. 2, pp. 261-4.
- Ribot, J.C., 1999, 'Decentralisation, Participation and Accountability in Sahelian Forestry: Legal Instruments of Political-Administrative Control', *Africa*, Vol. 69, No. 1, pp 23-64.
- Ribot, J.C., 2001, 'Actors, Powers and Accountability: Implementation and Effects of Decentralised Environmental Management in Africa', Washington, World Bank.
- Roper, J., and Maramba, P., 2000, 'Community based natural resource management project', *Mid-term Review*, Harare, CIDA Project ZW-16883.
- Runge, F., 1992, 'Common Property and Collective Action in Economic Development', in D. Bromley, ed., *Making the Commons Work: Theory, Practice and Policy, San Francisco*, ICS Press, pp. 17-39.
- Schug, D.M., 2000, 'The Bureaucratisation of Forest Management in India', *Environment and History*, Vol. 6, No. 2, pp. 229-242.
- Scoones, I., ed., 2003, *Dynamics and Diversity: Soil Fertility and Farming Livelihoods in Africa*, London, Earthscan Books.
- Shah, S. A., 1995, 'Status of Indian forestry', *Wasteland News*, Vol. 11, pp. 14-32. Shiva, V., 1993, *Monocultures of the Mind: Perspectives on Biodiversity and Biotechnology*, London, Zed Books.

6.mapedza.p65 145 25/08/2006, 12:16

- Sibanda, B.M.C., 2001, Wildlife and Communities at the Crossroads: Is Zimbabwe's CAMPFIRE the way forward? Harare, SAPES Books.
- Singleton, S., 2002, 'Cooperation or Capture? The Paradox of Co-management and Community Participation in Natural Resource Management and Environmental Policymaking', *Environmental Politics*, Vol. 9, No. 2, pp. 1-21.
- Sundar, N., 2000, 'Unpacking the "Joint" in Joint Forest Management', *Development and Change*, Vol. 31, No. 1, pp. 255-79.
- Wekwete, K. H. and de Valk, P., 1990, *Decentralising for Participatory Planning?*, Aldershot, Gower Publishing Co.
- Williams, M., 2003, 'The Antiquity and Modernity of Environmental Change and Concern', Paper presented at the Caring for Nature: Sources and Conflicts of Modern Environmentalism, organised by the British Academy, on 3 November, 10 Carlton House Terrace, London.
- World Commission on Environment and Development (WECD), 1987, *Our Common Future*, Oxford, Oxford University Press.
- Young, O.R., 2002, 'Institutional Interplay: The Environmental Consequences of Cross-Scale Interactions', in T. Dietz, N. Dolsak, E. Ostrom, and Stern, P. C., eds., *The Drama of the Commons*, Washington, National Research Council, pp. 263-291.
- United Nations Environment Programme (UNEP), 1992, 'Rio declaration on environment and development', Developed at the United Nations Conference on Environment and Development, Rio de Janeiro, Brazil.

6.mapedza.p65 146 25/08/2006, 12:16