

Collaboration and Credible Commitments: Experiments with Collaborative Resource Management in Uganda

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Introduction

Over the past decade, a paradigm shift in conservation has refocused resource management strategies away from strategies focused on restricting human involvement towards encouraging the involvement of local people (Borrini-Feyerabend, 1997; 1996; Western & Wright, 1994; Kiss, 1990). In both developed and developing countries, incorporating local participation is seen as an essential component of a successful conservation model. Despite this widespread promotion, most participatory strategies have not yielded long-term successes. Scholars suggest that these poor results are due to the failure to incorporate meaningful local participation in decision-making (Ghimire & Pimbert, 1997; Pimbert & Pretty, 1995). Despite the inclusion of local people in benefits, there is often little inclusion in decision-making and managerial responsibilities.

Collaborative management,¹ or the sharing of power between local people and the government authority, represents an attempt to move past passive participation in benefits and involve meaningful local inclusion in rights and responsibilities (Borrini-Feyerabend, 1997; 1996; Fisher, 1995). Collaboration recognizes that local people have often been successful resource managers as well as the realization that their support is essential to successful conservation. Including meaningful local involvement produces better decisions, more equitable decisions and decisions that are more likely to be followed (Prystupa, 1998). However, as with the participation literature in general, the bulk of the collaboration literature either discusses the merits of co-management or examines examples of collaboration and their success and failures (Prystupa, 1998).

This paper addresses this gap in the literature by examining experiments with collaborative management with communities bordering two national parks in Uganda.

Uganda has been in the forefront in Africa in experimenting with collaborative management of protected areas. However, in Uganda, the impetus for collaboration is agency-led, rather than led by local people. Under such conditions, commitment mechanisms constitute an important ingredient of successful collaborative efforts.

Paradigms of Resource Management

The debate over appropriate resource management systems has commonly been framed in reference to the perceived *tragedy of the commons* (Hardin, 1968) where individual rationality yields collective disaster. Overcoming this tragedy, or other situations where the benefits are collective while exclusion is difficult, requires either privatization or enforcement from an external authority. National parks, with their restricted rules of access and central government management represent the belief that an external enforcement authority is necessary if natural resources are to be conserved. State level management involves a centralized authority managing based on scientific data that are deemed most relevant to the resource being managed (Berkes, George & Preston, 1991). The central government authority determines the laws and regulations and actively enforces these regulations. Both local people and private accumulators deem the scientific management and external enforcement represented by state control necessary to prevent eventual transformation of natural areas.

¹Such sharing of rights and responsibilities is also referred to as co-management (Pinkerton, 1992; 1989; Berkes, 1989) or Joint-Forest management (Asher, 1995; Arnold, 1993).

Nevertheless in many countries, centralized control has not effectively protected natural areas (Kramer & van Shaik, 1997; Wells & Brandon, 1992). In the absence of effective external enforcement, creating national parks has turned many areas into areas of open access, with neither traditional nor government authorities exerting control over behavior (Ascher, 1995; Ostrom, 1990; Bromley & Cernea, 1989). This failure has caused a reevaluation of the supremacy of centralized management techniques. By refocusing attention on rural communities, scholars have recognized how the uniform rules of the national park model inherently ignore the local conditions and norms that have arisen to adapt to the specific local environmental conditions.

Recent work by anthropologists and institutional scholars have identified conditions under which small-scale non-Western societies have developed local resource management systems that protected natural resources over time (Bromley, 1992; Ostrom, 1990; Berkes, 1989). In contrast to Hardin's despoilers, local people can be more effective resource managers as they have more detailed site-specific knowledge as well as social sanctioning mechanisms that serve as better regulators of behavior than formal external enforcement. The local rules that develop are often complex layers associated with differing rights to differing resources in sharp contrast to the exclusionary design of national parks which treats "nature" as a resource in itself. These systems are decentralized, tend to be consensus-based and enforced through social sanctions (Berkes, George & Preston, 1991). Being based on customary practice, local knowledge and cultural tradition, rather than formal science, they are often not regarded as management systems by central government managers.

This recognition of the characteristics of successful self-governing institutions has refocused the debate towards local communities. However, even in the case of successful local resource management systems, modern pressures such as state intervention, increasing market orientation, commercialization, migration and population pressures are eroding these complex traditional systems (Kramer & van Shaik, 1997). These changes can transform existing systems of rules into open-access exploitation that more closely reflects Hardin's tragedy (Bromley & Cernea, 1989).

Collaboration as an Alternative Approach

Systems where local communities and the central authority share rights and responsibilities for the park, address the dilemma of encouraging more active participation, while maintaining the goal of conservation. Alternatively described as joint forest management (Fischer, 1995; Arnold, 1993), collaborative management (Scott, 1998; Borrini-Feyerabend, 1997; 1996) or co-management (Prystupa, 1998; Pinkerton, 1992; 1989) these systems represent efforts to move beyond passive participation and involve local people directly in the management of the protected area. This paper will use the term collaborative management, defined as *the sharing of power and responsibility between the government and local resource users*,² to describe such partnership agreements. The centerpiece of collaborative management is the development of an agreement by all primary stakeholders which specifies their respective roles, responsibilities and rights in management of the protected area (Borrini-Feyerabend, 1997). Collaborative management differs from other forms of participatory conservation in that it entails an official distribution of responsibility and authority,

² From Berkes, George & Preston (1991), 12.

although with the recognition that it is generally neither possible nor desirable to vest all management authority in the local community. Collaborative management can be represented as a continuum of complete government control to complete local control (See Figure 1).

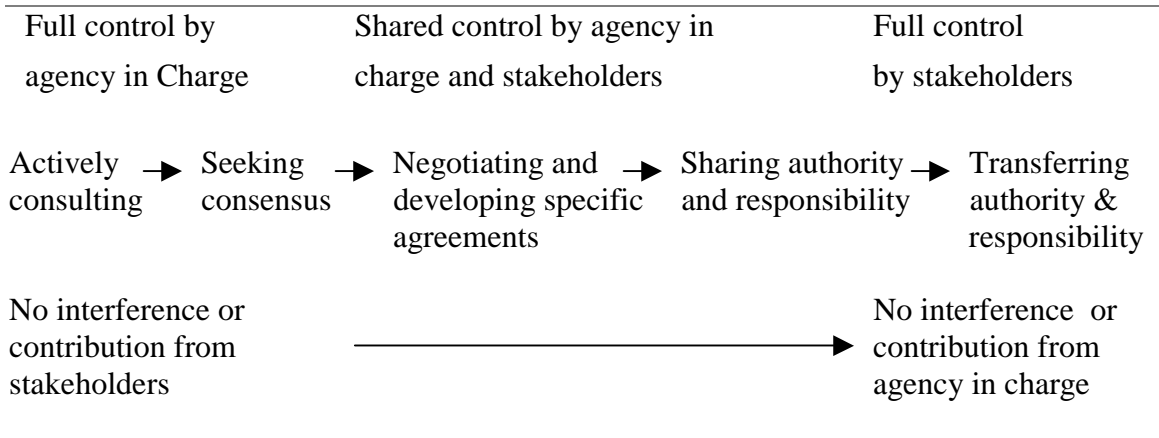


Figure 1: Continuum of Participation (Modified from Borrini-Feyerabend, 1996).

Moving to the right along the continuum, the extent of local rights and responsibilities increases. By contrast, the passive provision of benefits offered by many traditional participatory conservation programs falls at the left end of the spectrum. Under collaborative management, representatives of the major stakeholders, including the park authority, accept specific roles, rights and responsibilities in its management (Borrini-Feyerabend, 1996; Fischer, 1995). The nature of the distribution of these rights will vary according to specific local conditions, therefore there is not a specific location along the continuum that can be described as *collaborative management*. Collaborative management can thus be seen as a process, rather than a fixed state. The process of negotiation is central to a collaborative agreement as both sides must agree to the specified rights and responsibilities.

A successful collaborative process can integrate both economic and empowerment benefits to the local communities, provide a forum for interaction between the park and local people, allow for the incorporation of different values and local knowledge of the biological resources and human activity (Borrini-Feyerebend, 1996; Fisher, 1995; Selin & Chavez, 1995). Despite these potential benefits, encouraging collaboration may be difficult as the transaction costs of participating combined with the historical antagonism between the park authority and local communities present formidable barriers to cooperation. Moreover, people may choose to participate for strategic reasons, or for individual gain, rather than in the hopes of contributing to the collective good (Pinkerton, 1992; Ostrom, Schroeder & Wynne; 1993; Ostrom, 1990). Thus, substantial barriers exist both towards encouraging participation and directing the participation towards the goal of conservation (Prystupa, 1998; Pinkerton, 1992; 1989).

In contrast to many co-management agreements in Asia, collaborative management in Uganda is being developed not towards conservation of private or communal land, but in federally owned national parks. Unlike many of the collaborative experiences in the United States, the impetus for collaboration came from outside the community, the national park authority and international conservation ngos. Additionally,

important obstacles to collaboration exist when there is an institutional culture of rational planning, the organizations that have been previous adversaries and significant power differences between parties (Selin & Chavez, 1995). All of these unfavorable conditions exist in Ugandan rural communities as well as its conservation authority. Therefore this paper will extend these propositions to the development of collaborative agreements that are led from outside the community.

Pinkerton (1989; 1992) has developed theoretical propositions regarding the likelihood of the interested parties developing and negotiating collaborative agreements. She places particular emphasis on factors including multiple source of power such as fair and accessible courts, legislature and public boards, large power differential between parties, which are more relevant in developed regions with diversified economies and stakeholder groups than in developing regions (Pinkerton, 1992; 339-340). These factors contribute with collaborative propositions in the U.S. which are dominated by community-led, rather than agency-led, efforts at developing collaborative agreements (Selin & Chavez, 1995). However, her two earlier propositions (1989) are relevant throughout the world, including Africa:

- Co-management is most likely to develop when...(those desiring co-management) ... show a willingness to contribute financially to the rehabilitation of the resource and/or contribute to other management functions.
- Co-management is most likely to develop when there is an opportunity for a negotiation process and/or experimental co-management of one simple function, which may later be expanded to other functions.

Encouraging Collaboration through Credible Commitments

These propositions highlight the dilemma of an agency encouraging collaboration with communities that may not be interested. Especially in developing countries, collaboration is less a result of organized local communities demanding inclusion into the management of their resources, but government agencies, frequently in concert with international conservation organizations, changing their policies and inviting local communities to share rights and responsibilities over natural resource management. This approach transfer the method of analysis from identifying how communities can overcome the collective action problem and organize to represent their interests to identifying how the powerful government agency can entice historical antagonists to cooperate with them.

Much of the literature on participation view local people as willing collaborators, simply waiting for the appropriate incentives. However, in many circumstances, especially in developing countries, local participation has not just been ignored, but actively discouraged. Many African states have suffered from regimes that have employed state power in authoritarian, corrupt and predatory manners. Under these conditions, communities have often tried to evade, rather than engage, state authorities (Hyden, 1980). Therefore, simply revising policies or promoting potential incentives will not be effective unless communities can be convinced that the government's commitment to reform is credible. As the power to withdraw consent is an important "weapon of the weak," (Scott, 1976), analyzing the impacts of participation requires identifying the motivations of local community members.

Inducing cooperation with conservation policies is especially problematic as local communities often distrust the central government authority and the armed park rangers, with whom any contact is mostly adversarial. Thus, in many cases, individuals pursue the exit option (Hyden, 1980), choosing to avoid contact as much as possible both with government and park authorities. Implementing collaborative agreements thus presents a problem in communities whose relations with park authorities have been openly hostile. However, it also presents an opportunity for reforming governments to change this perception – if they can convince people that the reforms are credible. This is essentially a problem of reputation-building; how to both change the way the state agency operates and simultaneously change the public's perception of the state. Obtaining support for conservation institutions will likely be increasingly difficult as unlike other sectors such as education, where state return after years of neglect would be welcomed, state enforcement of conservation laws after years of non-enforcement will likely not be welcomed by most park neighbors.

A defining characteristic of successful common-pool resource arrangements is that individuals overcome the assurance problem and convince individuals that others are contributing, thus overcoming the incentive to free-ride. Transferring this logic to collaborative agreements, government authorities must convince community members that it will meet its obligations, as well as provide assurances that other citizens will in fact contribute. The less credible the policies, the less likely that individual community members will agree to alter their behavior and work with the formal government authority. Policies most likely to demonstrate the government's commitment to reform include short-term economic benefits and repeated interactions. Including local people is substantially different than allowing them influence. The greater the influence accorded local community members, the greater the likelihood that communities will agree to continue the process.

Individual decisions whether or not to follow park rules will often reflect quasi-voluntary compliance (Levi, 1988). Quasi-voluntary compliance occurs when individuals recognize that they will receive some benefit from compliance, and that there will be sanctions, or costs, to violations of the rules. Under such conditions of mutual mistrust, local compliance is contingent upon local people valuing the collective good, assurances that the government will meet its obligations (credible commitment) and assurances that other citizens will in fact contribute (no free riding) (Levi, 1997). Thus, compliance is more likely when individuals' perceiving the policy to be legitimate and its implementation as fair as well as requiring information on the behavior of other actors. Individuals who contingently consent are influenced by both social values and rationality (Levi, 1997). Social values may or not be consistent with material incentives of the relevant actors. Policies most likely to evoke widespread behavioral consent are those that facilitate interaction between rangers and local people and whose objectives are consistent with the social values of the individuals.

Exploring Collaboration in Uganda

This study examines collaborative agreements in communities bordering two national parks in the East African country of Uganda. Research was conducted in communities bordering two Ugandan national parks, Bwindi Impenetrable and Mt. Elgon. These two parks were selected because they were the first two to sign

collaborative agreements and therefore provide the best indications of preliminary outcomes. Both parks also have comparable physical characteristics, management histories and socio-economic characteristics that will facilitate comparability. To what extent is the opportunity to collaborate and participate in park decision-making meeting the objective of encouraging local support for conservation? This paper will examine (the level of local influence in the process) therefore not simply the impacts of the different policy incentives towards influencing attitudes, but the linkages between attitudinal change and behavioral change. This study employed several different indicators to measure conservation performance: attitudes, participation of the community and levels of illegal use. This study will compare the pilot parishes to the control parishes to examine the extent that these indicators of success have improved as responsibilities have increased. If the lack of incorporating meaningful participation has been one of the primary failures of participatory initiatives, do we see improved outcomes the more active the participation?

Research Sites

At Mt. Elgon National Park, *Mutushet* serves as a pilot parish experimenting with collaborative management while *Moyok*, in the absence of any local management responsibilities, serves as the control parish. At Bwindi Impenetrable National Park, *Mpungu* is the pilot parish promoting collaborative initiatives, with *Bujengwe* serving as the control.

National Park	Pilot Parish	Control Parish
Mt. Elgon N.P.	Mutushet	Moyok
Bwindi Impenetrable N.P.	Mpungu	Bujengwe

Both Mutushet and Mpungu signed collaborative management agreements with the park authority outlining local rights and responsibilities. At Mutushet, the community is allowed access to minor forest products, such as collection of honey, firewood and vegetables, in return for electing a local management committee to ensure that park rules are being followed. At Mpungu, specified community members are allowed access to the park to collect medicinal plants and basket materials. In return for these use rights, both committees are responsible for ensuring that park rules are followed, serving as a liaison between the park and community members and monitoring illegal use and forest condition. Both Bwindi parishes have also received community projects (school buildings) paid for in part by park revenues. The lack of significant tourism at Mt. Elgon has delayed the initiation of such revenue sharing schemes. The two control parishes have no legally established user rights or decision-making responsibilities.

Bujengwe lies to the west of Mpungu, separated only by the narrow neck of BINP. As in Mpungu, the majority of the population previously relied heavily on the forest for subsistence needs as well as employment. However, unlike Mpungu, residents have not been able to access the resources within the park since 1991. Socio-economic conditions are much the same as in Mpungu, although a greater percentage of people have begun growing tea as a cash crop. A parish committee exists primarily to select revenue sharing projects, but as with other committees, they also see it as their job to teach about the importance of the forest. By the end of 1997, Bujengwe had received one revenue sharing project; an addition to a primary school.

Moyok parish occupies 14.8 km² of Kaproron sub-county, Kapchorwa District. Being near the Kapkwata softwood plantation and sawmill, Moyok residents have easy access to sawn timber. Its proximity to the sawmill also signified that people were allowed to clear the forest and cultivate under the *taungya* system (although seedlings were never actually planted in the Moyok area). Most parish residents cultivated inside this area until 1986 when the last people were evicted (excluding the Benets whose cultivation has increased steadily). However, most people, if not all, had land outside the park as well so few if any were made landless after being expelled from the park. Although, cultivation was discontinued in 1986, continual livestock grazing has ensured that the entire boundary with the park has remained grassland with minimal forest regeneration.

Results

Attitudes

As local communities often suffer the costs of conservation, while the benefits accrue elsewhere, park neighbors commonly hold negative attitudes towards national parks (Borrini-Feyerabend, 1996; Pimbert & Pretty, 1995; Kiss, 1990). This animosity is especially strong when people lose access to resources once previously enjoyed. Both Bwindi and Mt. Elgon were forest reserves until the early 1990s. Once they became national parks, local communities lost lawful access to many park resources enjoyed during the regime as a forest reserve (Kamugisha et al, 1997). Not surprisingly, at both parks, people were greatly opposed to and angry about this regulatory change (Scott, 1997; 1994; IUCN, 1997; Mugisha; 1997; Tumiseverere, 1997; Docherty, 1993). Lacking the desire to cooperate, as well as an established arena for expressing their feelings, local people showed their resentment by ignoring the new restrictions and continuing to use park resources. This powerlessness of UWA forced the initiation of community programs in an attempt to gain their support. Thus, these programs were developed as responses to the rules in use being practiced by local communities, as well as the recognition of the powerlessness of the formal park management authority.

How effectively have different community conservation initiatives altered these negative attitudes of park neighbors? More significantly, to what extent has attitudinal change been translated into behavioral change? Survey results indicate that attitudes towards the park do not vary significantly across the two parks (See Table 1). As expected, they do vary significantly between parishes, however not in the pattern expected. Rather than consistently more positive attitudes occurring in the two pilot parishes, significantly more positive attitudes are reported in Mutushet and Bujengwe than in Moyok and Mpungu. Although the absence of a pre-test limits the comparability of the impacts of the community conservation policies, combining survey data with other data sources allows identification of several important preliminary outcomes.

Table 1: Attitudes towards the National Park

National Park	Parish	Positive Attitude	Negative Attitude	χ^2
Bwindi	Mpungu*	29	21	5.66
Bwindi	Bujengwe	40	10	p<.02
Mt. Elgon	Mutushet*	47	5	28.7
Mt. Elgon	Moyok	20	30	p<.01

n=202

*pilot parish

Although the positive attitudes reported at Mutushet are as expected as earlier studies indicated a more positive attitude than in other parishes (Scott, 1994; Docherty, 1993), the Mpungu results are perhaps more insightful. Changes in attitudes since the collaborative programs vary significantly across parishes as well (See Table 2). Examining the results of attitudinal change by parish highlights the low pre-intervention results for Bwindi. Both Bwindi parishes show substantial improvements in attitude towards the park over the past year. However, over this period attitudes have improved to a significantly greater degree in Bujengwe than in the pilot parish, Mpungu. Mpungu's user rights program has been active for three years, and 60% of respondents indicated a positive attitude towards the park. Although much lower than Mutushet, park and ngo officials confirm that this is undoubtedly a higher percentage than before the initiation of the user groups, indicating that the programs are having a positive impact³. However, it is substantially lower than that of Bujengwe, which held similarly negative feelings towards the park at the time of park creation⁴ and has not had the benefit of user rights nor has had as many revenue sharing projects funded as had Mpungu.

Table 2: Change in attitudes towards the National Park

National Park	Parish	Positive Change
Mt. Elgon	Mutushet*	13 (25%)
	Moyok	21 (42%)
Bwindi	Mpungu*	31 (62%)
	Bujengwe	40 (80%)

n=202

*pilot parish

Unlike the Bwindi results, the two Mt. Elgon parishes demonstrate much smaller improvements in attitudes. However, these similar outcomes occur for different reasons. The lack of positive change at Mutushet reflects the generally positive views prior to the intervention. Thus the positive attitudes reported in Table 1 reflect these high pre-intervention attitudes, rather than being a result of collaboration. At Moyok meanwhile, people are not satisfied with the incentives being offered them. Although they can legally collect minor forest products, they view this as insufficient compensation for the loss of cultivation rights. Therefore at neither parish, can the community programs be said to have significantly altered attitudes towards the park.

Do the individuals that receive the benefits, primarily those on the management committees, have the most positive attitudes towards the park? 23 of the 26 members (88%) of user committees (either elected or local government representatives) recorded positive attitudes, a figure substantially higher than the population as a whole (67%). As most people were elected to these positions, rather than joining voluntarily, it is unlikely that this figure merely represents that those people with positive attitudes were more likely to join the committees.⁵ Therefore, it seems likely that the benefits of being on the

³ These figures are likely inflated as respondents may have a bias towards saying anything critical of the park especially due to the history of harsh treatment by rangers. Bwindi's Law Enforcement Warden estimated the percentages to be 40% positive, 60% negative (Echodu, 1997).

⁴ Interviews with rangers, CARE officials and members of both communities indicated that attitudes in the two parishes were similarly negative at the time of park creation.

⁵ Although at Mutushet, over half of those originally elected have left the committee, many at least in part because of the lack of personnel benefits.

committee are helping improve attitudes. Although members of all committees regularly complained about the lack of material compensation, they nevertheless do receive benefits. In rural areas with little paid employment, being recognized as a member of such a committee provides a degree of community status. In addition, committee members are allowed direct access to the resources. In Mpungu, only Forest Society members are allowed to enter the forest to collect the materials required for baskets and medicines. Thus, they alone are guaranteed permanent access to whatever amount they desire. In Mutushet, committee members never have to worry about being confronted in the forest for any reason as well as have the potential to negotiate for personal favors with neighbors discovered illegally in the park. Finally, both user committees as well as members of the PMAC and PPC receive benefits of attending meetings in different locations, often providing sitting allowances.

The Mutushet Committee has experienced almost a fifty percent turnover in its two years of existence compared to the Mpungu Committee whose membership has remained steady. This variation can be explained because the Mpungu Committee was by definition comprised of resource users, while the Mutushet Committee was comprised of local leaders, many of who rarely used the forest. The non-users on the Mutushet Committee, disappointed over lack of payment, represent the majority of those whom have left the committee. Those who regularly enter the forest to collect products have remained as active members. Thus, user rights only serve as an effective incentive to those individuals who value use. From an institutional sustainability perspective therefore, it is necessary to include people who have a direct interest in the end objective (conservation of park resources) rather than community members as a whole.

Community Participation

Does the empowerment of a management committee lead to greater participation by community members as a whole? As measured by the percentage of respondents that had attended meetings concerning park management or rules, the levels of community participation are relatively similar across the four parishes, ranging between 48-57% (See Table 3). These figures do not vary significantly by parish indicating that organizing collaborative management groups does not seem to have increased the level of participation of the community as a whole. Although members of the Forest Society in Mpungu and the Resource Use Committee in Mutushet meet at least occasionally, they have not regularly been calling community meetings to share their decisions or ask input from the community at large. Thus without incentives for the committee to communicate with the community, empowering a committee does not necessarily lead to greater participation by the community at large.

Table 3: Attendance at Meetings Concerning Park Management

National Park	Parish	# Have Attended	# Never Attended	χ^2
Bwindi	Mpungu*	24	23	.08
Bwindi	Bujengwe	24	26	
Mt. Elgon	Mutushet*	29	22	.09
Mt. Elgon	Moyok	27	23	

n=202

*pilot parish

Why do people choose whether or not to participate? Of the 104 people who had attended meetings, only nine indicated going for a specific purpose, such as to voice their opinion on a particular issue or to have a dispute resolved. The vast majority attended passively, simply because a community meeting had been called. Tellingly, over half of those who had never attended any park meetings claimed either that they had never been informed of any meetings or that the meetings were for committee members only. Even in Mpungu, where selecting revenue sharing projects offers the potential for community members to have meaningful input into decisions, individuals claimed that there was “no communication, the committee itself makes decisions about spending the money.”⁶ Thus, even though local people recognize that the committee has some decision-making power, there have been little formal attempts to participate in influencing their decisions. The level of active participation of the community is low. That we do not see a significant difference between the pilot and control parishes highlights the need for greater linkages between the committee and the community.

These results highlight that attending meetings called by others generally reflects a passive form of participation, with most attendees offering limited input to the proceedings. If participation is primarily passive, local people may not consider it participation at all. A measure of more active participation is the extent to which community members have adopted active responsibilities, such as reporting illegal users. A prominent rationale for extending management authority to local communities is the assumption that community members will serve as permanent “eyes”, thereby reducing the need for official enforcement (Aruna, 1997). If offering people user rights in exchange for managerial responsibilities are achieving their goal of providing people a stake in the resource, then people should be motivated to actively protect their stake in the park resources.

Although reporting illegal users is intended to be a primary responsibility of community members, people are understandably hesitant to do so as personally confronting illegal users can be dangerous or lead to social ostracism. Therefore, although 75% of respondents claimed that they would agree to report illegal users (either to the local administration or to park rangers), only 8% had actually ever done so. Even in Mutushet, where people publicize how they actively protect the forest, the figure is comparable to those in the other parishes except Bujengwe. Comparing the two Bwindi parishes produces the expected pattern of greater reporting in Mpungu than Bujengwe. However, this pattern is not repeated at Mt. Elgon, where the two parishes have almost identical records of reporting. Rangers at Bwindi claimed that people in Bujengwe did report occasionally, but less frequently than in Mpungu. The low survey response total at Bujengwe can possibly be explained as unlike the other three parishes, people have no legal access rights to the forest and therefore risk implicating themselves if they report witnessing illegal activity. These results indicate that receiving benefits does not necessarily lead to more active forms of participation.

That people are discouraged from reporting illegal users is not unexpected as many respondents indicated the fear that it would foment hatred or lead to social ostracism. Some respondents also indicated that they could not report others because they enter illegally themselves, “By reporting, I will be putting myself in jail.”⁷ Thus,

⁶ Anonymous Mpungu resident.

⁷ Anonymous Mpungu resident.

despite the intention that allowing use rights would motivate people to protect their stake from outsiders, if local illegal use is common, it may actually serve as a disincentive to report. As individuals receive no benefit from reporting, yet risk social ostracism, this result supports our hypothesis that direct individual benefits will be necessary. That people in the pilot parishes aren't reporting to a significantly greater extent than in the control parishes is another indicator of the failure of the committee participation to motivate community participation. Only one-third of the respondents in the two pilot parishes was even aware of a signed agreement between the community and the park. Of those who had heard of it, not one respondent felt that they had any personal responsibilities beyond simply following the rules themselves. Any further responsibilities were for the committee members, the people elected to do so. Thus, the results indicate those individual decisions whether or not to report illegal users have not been influenced by the collaborative agreements.

A second measure of how active the participation has been is the extent to which local people have successfully influenced rule formation and change. In Mpungu, although the process of negotiations involved numerous meetings over a nine-month period, most people perceived these meetings as largely informative as 60% of respondents claimed that at the meetings, local people were mainly just taught the rules. One resident described the purpose of the meetings as, "People were told what the rules were and to agree with them."⁸ Only three people reported that local people had any input in determining the rules of access. CARE records of these meetings show that numerous participatory rural appraisals (PRAs) were undertaken to gain local input and local people ranked basket materials and medicinal plants as their top two choices. However, locals' realm of influence was severely limited, as the resources that people valued the most – gold, timber, hunting – were deemed non-negotiable. Table 5 shows that the resources that Mpungu residents felt were most important to their family before the park were gold, timber and poles. Basket materials and medicinal plants ranked only fifth and sixth.

⁸ Anonymous Mpungu resident.

Table 4: Products ranked most important prior to park creation⁹:

Product	Mutushet	Moyok	Mpungu	Bujengwe	Total
Timber	3	8	27	19	57
Poles	9	29	11	5	54
Medicinal Plants	20	2	1	23	46
Firewood	25	3	11	6	45
Cultivation	0	36	1	0	37
Gold	0	0	22	9	31
Bamboo	16	5	0	0	21
Grazing	9	7	0	0	16
Hunting	0	4	11	1	16
Basket Materials	0	0	5	10	15
Honey	3	2	2	4	11
Vegetables	8	0	1	1	10
Rafters	3	4	0	0	7
Security	2	0	0	0	2
Employment	0	0	0	1	1
TOTAL	98	100	92	79	369

It is more insightful to divide these responses into two categories: products which harvesting is deemed less destructive and which have been allowed in at least one of the user rights schemes: medicinal plants, firewood, bamboo, basket materials, honey, vegetables, rafters, security and employment; and products which are commonly deemed too destructive to be allowed: timber, poles, cultivation, gold, grazing¹⁰ and hunting. These results are depicted in Table 5:

Table 5: Products Ranked Most Important Prior to Park Creation

Desired Product Type	Mutushet	Moyok	Mpungu	Bujengwe	All Parishes
Major (Not allowed)	21	84	72	34	211
% of total	21%	84%	78%	43%	57%
Minor (Allowed)	77	16	20	45	158
% of total	79%	16%	22%	57%	43%
Total	98	100	92	79	369

$$\chi^2=103.69, p<.01, df=3$$

⁹ Nineteen respondents (8 from Mutushet, 2 from Mpungu, 9 from Bujengwe) reported never having received products from the forest.

¹⁰ Grazing occurs in the prohibited category because although it is being allowed temporarily in Mt. Elgon, both park officials and conservationists feel that it is too destructive to be allowed permanently. Incorporating grazing into the less-destructive category does not alter the significance of these results.

Table 5 shows that 57% of the forest uses deemed most important by local communities are not available in any of the user rights schemes. This table depicts a large difference in the value of minor products in Mutushet and Bujengwe than in Moyok and Mpungu. These results support the attitudinal results reported earlier. Thus, even though Bujengwe residents are not yet benefiting from participatory incentives, they are less desirous of products that are allowed. By contrast, although Mpungu residents benefit from this scheme, the products which they are allowed to collect, medicinal plants and basket materials, were named as one of the most important by only six (12%) of the respondents. Similarly, although Moyok residents are allowed access to a relatively wide array of products, the few products that are banned are the ones that they overwhelmingly feel are the most important. This indicates that although people did participate to a limited extent in selecting the rules of access, that the outcomes were so different than if locals had complete control has caused people not to perceive their limited input as actual input.

The perceptions of the effectiveness of local input into rule making are similar to Mutushet, even though at Mutushet people had much greater influence in actually selecting what was to be allowed as there were fewer restrictions. However, a significantly different number of respondents from Mutushet and Moyok reported that some negotiations did take place at the meetings indicating that the general community participation is more active in the pilot parish. More significantly, people from Mt. Elgon have witnessed the success of their input by successfully having the policy on grazing changed. Although grazing, along with hunting and pit sawing, was originally declared non-negotiable, continual lobbying, as well as widespread illicit grazing, forced the park to tacitly accept grazing within the park.¹¹ As residents of both Mutushet and Moyok have benefited by this rule, the difference in perceptions between the two Mt. Elgon parishes indicates greater community involvement at Mutushet. People at Bwindi have not had the experience of local support successfully overturning a prominent previously determined park rule.

This evidence suggests that participation has been slightly more active in the pilot parishes. However, if community conservation programs are to achieve their goal of reducing pressure on the forest then they must influence the people most likely to disturb the resource. To examine to what extent these programs are doing so requires moving beyond aggregate levels and examining whom is participating. Numerous studies have shown that people residing closest to the park commit the majority of illegal acts. Are the people with the poorest attitudes and those most likely to enter the park the ones that are participating?

Results of this survey show that the closer people live to the park, the more that they have been attending meetings. Analysis indicates a negative relationship between distance and attendance indicating that residents who live farther away from the park border are less likely to attend meetings than those who live closer. Thus in this instance, the people most dependent on the forest are most likely to participate. Similarly, those who live closest to the forest are more likely to witness people entering the park illegally.

¹¹ The Minister of Tourism, Wildlife and Antiquities visited Kapchorwa in 1996 and heard so many complaints of hardships that he decreed that it be allowed until security is restored in the plains. Although still officially banned, UWA has temporarily agreed not to enforce it.

Are the people who use the park the most taking up their responsibility by reporting the most? Eleven of the sixteen people who admitted reporting illegal users live less than one kilometer from the park boundary. As only 40% of respondents lived within this area, residents nearer to the park have reported at a higher rate than the population as a whole. However this figure is not significant ($p=.204$).

Conservation Outcomes

A final measure of the impacts of these programs is the effectiveness at conservation of the national park. If community conservation is conceived of as a means to improve conservation, then analysis of program impacts must include not only the extent of participation, but also the extent to which participation is translated into improved conservation. Are the initiatives encouraging people to comply with park regulations and reduce illegal use of the park resources?

The original design of this study called for systematic measurement of the extent of illegal resource use within park boundaries as per the IFRI research protocol used effectively in other Ugandan forests (See Gombya-Ssembajjwe, 1996; Ostrom & Wertime, 1995). Although systematic measurement within the park proved logistically impossible, evidence gained from interviews and direct observation provided anecdotal information of the extent of illegal resource use within the national park. Remote sensing (van Heist, 1994) supports the reported and observed evidence clearly demonstrates that the level of illegal use is much lower at Bwindi than at Mt. Elgon.

At Bwindi, the most prominent indicator of conservation success is the status of the mountain gorillas. Poaching has been extremely rare, with only four gorillas reported killed in a non-poaching incident through 1997 (Echodu, 1997). Populations and overall health of the species have experienced a steady increase (Plumptre, 1998). In addition to the gorillas, Bwindi's flora has experienced widespread regeneration of the previously degraded areas near the park boundaries. Comparing Mpungu to Bujengwe yields very little difference in levels of illegal use and forest condition. Although limited use has been allowed at Mpungu, this has not translated into widespread illegal use as well. Residents of Bujengwe have generally refrained from illicitly usurping the resources lawfully collected by the Mpungu user group.

At Mt. Elgon, the agreements allowing widespread limited use have created a continuous stream of people within the park. In many areas of the park, this use is widespread and involves more destructive activities, including settlement, cultivation and pit-sawing. The forest bordering Mutushet is in much better condition than in many other areas, including Moyok. Although there is widespread use, much of it legal, including occasional incidents of pit-sawing, Mutushet has avoided the forest clearing witness at other locations. The Moyok forest line was completely cleared for cultivation during the 1980s and has yet to recover. Although Moyok residents have ceased cultivating within the park, widespread grazing, pit-sawing and pole cutting have resulted in the park being denuded of forest cover over wide areas (van Heist, 1994). Comparing Mutushet to Moyok therefore shows frequent levels of use at both locations, but with more widespread major destruction, less regeneration and absence of forest cover at Moyok.

In the absence of reliable biological data, rule compliance serves as a more useful indicator of the amount of illegal resource use occurring within the parks. For the purposes of this study, both arrest records and household surveys provided inadequate

indicators of illegal use.¹² However, as the same rangers patrol both research areas, interviews with rangers provided more reliable information. Analyzing reported levels of rule compliance, rangers reported little difference between Mpungu and Bujengwe, with poaching and firewood collection being the most common illegal uses. At Mt. Elgon, as is clearly evident from a cursory visual inspection, rangers confirmed that illegal use is much more common in Moyok than in Mutushet. In addition to being much more common, the activities are more destructive and the people less cooperative. The relative levels of illegal use are summarized in Table 6.

Table 6: Levels of Illegal Use

Park	Parish	Minor offenses	Major Offenses
Bwindi	Mpungu*	Low	Low
	Bujengwe	Low	Low
Mt. Elgon	Mutushet*	Medium	Low
	Moyok	High	High

*pilot parish

Explaining Participatory Outcomes

In failing to demonstrate a consistent pattern of improved performance the more active the participation, these results provide further empirical evidence depicting the difficulty of participatory conservation to generate sustained success (Songorwa, 1999; Gibson & Marks, 1995; Wells & Brandon, 1992). This study has however highlighted several likely determinants of the potential success of community conservation programs. Altering the formal rules towards allowing more active participation is not enough to compel greater community cooperation. The divergent results exhibited at Mutushet and Mpungu highlight three factors as likely to improve outcomes of participatory programs: maintaining adequate enforcement, incorporating local values and maintaining the consistency of rules. These aspects demonstrate a credible commitment on the part of UWA, as well as serving to integrate local values towards the forest into the operational level rules. Both of these activities increase the likelihood that local people will cooperate with the collaborative institutions.

Explaining Attitudinal Improvements

The collaborative program indirectly has influenced the differences in attitudes between the two Bwindi parishes. Collaboration has continued to focus Mpungu residents' attention towards the forest. Thus although people appreciate the products they are now allowed to access, they would nevertheless prefer to collect timber and gold and hunt wildlife. By contrast, Bujengwe residents have to a greater extent accepted the loss of access and have moved on to planning lives without access to the forest:

¹² For example, a typical month in Mt. Elgon showed two to four people being arrested *in the entire park*. The author typically viewed at least that number of illegal users every time he entered the park. Very few survey respondents were willing to report that illegal use was occurring in their parish, even though the question asked specifically if *others* (rather than the respondent) went into the park illegally as well as assurances of confidentiality. Therefore, neither measure adequately reflected the levels of illegal use described by rangers and visible by observation.

Two years ago, attitudes weren't so good. At first people thought they still might be able to sneak in, now they know they can't. At first, people thought they might be given some small piece of land or it might go back to a forest reserve, but now they know it won't.¹³

Moyok reflects a similar pattern to Mpungu. Only 40% of respondents expressed a positive opinion of the park even though more people are allowed to collect a wider range of products than the people in Mpungu, and just as much as those in Mutushet. By promoting a continued connection to the park, while denying the use most stridently desired, Moyok residents have continued to be fixated on access to the park. In contrast to the sentiments expressed in the above quotation by a Bujengwe PPC member, Moyok residents are still hoping that the park rules are not permanent; that people will be given some land or the park will return to being a forest reserve, rather than moving on and developing alternatives. As long as the hope exists that cultivation may be allowed again, people in Moyok will not be satisfied with petty use rights. Comparing Bujengwe to Mpungu and Mutushet to Moyok indicates that unless accompanied with appropriate responsibilities, allowing user rights may be counterproductive towards conservation.

Despite this increased influence of local participation at Mt. Elgon, attitudes towards the park do not vary significantly from Bwindi. Neighbors of Bwindi have been taught to understand the benefits of the park, and that the park is there to stay. The degree to which people accept that the park rules are permanent seems to influence more how they act towards the park than does the extent of participation. Thus, their reported attitudes and relative law-abidance are irrespective of the extent of their input. By contrast at Mt. Elgon, the influence of local people in changing the rules of access both officially and unofficially (in doing whatever they want because of lack of enforcement), has given the impression that locals can have influence. Therefore, especially in Moyok, park neighbors have not accepted that the transformation to a national park is a permanent change and are still lobbying for change of park boundaries and rules. In this case, having some degree of influence, rather than serving as an incentive for cooperation, has had the opposite effect.

The Importance of Enforcement

The measuring of attitudes at best is an imperfect indicator of policy success. Many policymakers and practitioners doubt the utility of attempting to measure them, believing that they are highly susceptible to change.¹⁴ Rather than simply measuring attitudes, a more useful indicator for analyzing policy outcomes is identifying the extent to which attitudes are translated into action. Does the occurrence of negative attitudes increase the likelihood that illegal use will be common? Conversely, where positive attitudes exist, are people more likely to cooperate? At Mpungu, for example, the generally poor attitudes have not translated into widespread illegal use. Conversely at Mutushet, attitudes are overwhelmingly positive, yet illegal use is still relatively high and few people outside the committee have taken active roles in reporting illegal users.

¹³Member, Park Parish Committee, Bujengwe parish.

¹⁴ Most conservation policymakers interviewed felt that attitudinal surveys were extremely unreliable and didn't place much faith in them as a basis for evaluating policy impacts.

These results indicate that such anomalies can partly be explained by identifying the significance of enforcement. The similar compliance levels at the two Bwindi parishes, in spite of their widely varying attitudinal levels highlights the importance of strict enforcement. Although consistent enforcement at Bwindi may have initially negatively affected attitudes, it has influenced individual decisions to abide by park rules to a greater extent than has promoting positive attitudes at Mutushet. As Hannah (1992) describes, that community conservation programs are intended to replace official enforcement is a common misnomer. Effective enforcement, either by local communities or the park authority, is necessary to eliminate the potential for free-ridership.

Measuring enforcement proved difficult as official arrest records were not only incomplete but reflected very little the level of illegal activity. For example, each time I entered the park at Mt. Elgon, I witnessed numerous illegal acts, yet the forty rangers are able to arrest only a handful of people each month. Official records simply do not reflect whatsoever the amount of illegal use going on. I attempted to use reported evidence from the surveys, but the results were unsatisfactory, as people were hesitant to report any knowledge of illegal use. Especially problematic was Bwindi where not a single respondent reported significant illegal use of any category. Although admittedly the level of illegal use at Bwindi is much lower than at Mt. Elgon, even rangers admit that it still exists. The survey results likely represent a fear of the consequences of indicating they might have knowledge of illegal acts, as the rangers have had a history of harsh behavior towards community members.

As a result of these problems with official records and survey responses, this study used people's perception of the likelihood of being caught if in the park illegally as a proxy indicator of the level of success of enforcement. It is assumed that the greater that people fear being caught, the less likely they will be to commit illegal acts. In addition, unsystematic park walks provided anecdotal evidence of low levels of illegal use in Bujengwe and Mpungu and high levels at Mutushet and Moyok. Reports from rangers and conservation workers were also used to compare levels of activity at the different sites within each park. At Bwindi, rangers reported no substantial difference between Mpungu and Bujengwe, although there is concern about damage along the routes used by the resource users in Mpungu. This reflects the trend in the park as a whole, where illegal use is down in all areas of the park (Wagaba, 1997). At Mt. Elgon, rangers reported that since the permission of grazing, cultivation by grazers had increased in the forest above Mutushet. Major illegal acts, especially pit-sawing, had been noticeably reduced.

Survey results show that citizens at Bwindi perceive a significantly higher threat of being caught if entering the forest illegally than do citizens at Mt. Elgon ($\chi^2=22$, $p=0$). The corresponding lower levels of illegal use at Bwindi indicate that a credible threat of being caught is a more effective deterrent than encouraging voluntary compliance. Participatory conservation schemes therefore need to be careful to not overlook the necessity of maintaining effective enforcement. Especially interesting is the high number of respondents from Mutushet who perceived the likelihood of being caught to be very low, especially since it is the only parish with an active local patrol group. Comparing both Mt. Elgon parishes to both Bwindi parishes, one sees a clear pattern of greater threat of enforcement at Bwindi. However, perhaps more interesting outcomes can be found by comparing the two Mt. Elgon parishes. Residents of Moyok represented a significantly

higher percentage of responses indicating a very high likelihood of being caught, and four times as many Mutushet residents as Moyok residents indicated that the chance of being caught was very low.

Paradoxically, the parish with the most active local patrolling is also the parish where individuals perceive the chance of being caught to be the lowest. This seeming anomaly shows that although some people feel that local people will be more effective than rangers in that they know better what is going on, for the same reason, they also know the times that it is easier to sneak into the forest without being detected. Several people at Mutushet indicated comments similar to the following, “Find the time when Siwa’s Group¹⁵ has gone to church, then sneak into the forest.”¹⁶ This lack of fear also represents the leniency of committee members when they meet people in the forest. The committee does not have the capacity to arrest or to punish offenders, although they have repeatedly asked for it. Instead, their mandate is to control resource use by persuasion, warning people and educating them as to why illegal use will be detrimental to the community as a whole. Committee members expressed differing opinions of the proper procedure for confronting illegal users, but generally they are to be warned and *educated*¹⁷ the first few times caught. Repeat offenders are to have their names sent to the park rangers who are to then have the responsibility of further punishment. However, this policy is being implemented as people being warned repeatedly, with little action ever taken against them.¹⁸ Thus, as committee members have neither the authority nor the inclination to punish, people are less afraid of meeting them, which has therefore reduced the committee’s impact on limiting local resource use.

By contrast, the fear of the rangers at Bwindi is evident from the responses of what people felt would happen if in the park illegally and confronted by rangers. Sixteen people reported that you would be beaten or killed, as compared to only one person from Mt. Elgon.¹⁹ Although there were no reports of people actually being killed by rangers, the harshness exhibited towards citizens at the time of park creation has left such an image ingrained in the minds and stories of park neighbors. Thus it appears that this fear of being caught at Bwindi has been a more effective deterrent than giving people a stake by allowing use at Mt. Elgon.

Several factors explain why enforcement at Bwindi is more effective than at Mt. Elgon. Bwindi, being Uganda’s showcase park, receives better supplies and support than at most other parks. More vehicles exist, so unlike Mt. Elgon, rangers at times are able to receive transportation. There is more supervision because of continual visitors and the staff of 40 enforcement rangers, represents 80% of the total at Mt. Elgon, which is four times larger. The intense international interest of the media and tourists gives the rangers

¹⁵ Commonly used term in Mutushet to refer to the Forest Management Committee.

¹⁶ Anonymous Mutushet resident.

¹⁷ Term frequently used by committee members which in itself describes how the committee perceives itself as working for the park, protecting it from the community, rather than being part of the community.

¹⁸ As an example, once when I accompanied a committee member on patrol, we came across a man carrying timber from a tree that had been pit-sawed. This was the seventh time that this particular committee member had caught this man, each previous time he had just been warned and educated. This time, likely because of my presence, the piece of timber was taken from the man and carried with great difficulty down the mountain to the house of the committee chairman as evidence of the offense. The offender was to report to the chairman’s house for further action, but never did.

¹⁹ A respondent from Moyok.

something to conserve for to a much more direct extent than at Mt. Elgon, where very few people take notice of the effectiveness of their work. Perhaps the most important reason is that as Bwindi is earning its own money, rangers can be paid directly. At other parks including Mt. Elgon, rangers are paid from headquarters where it is often delayed several months. The corresponding low morale of rangers is evident at Mt. Elgon where slacking of responsibilities and unethical practices are commonplace. However, if rangers can be assured of being paid even when headquarters is unreliable, morale and activity can be increased.

Integrating Community Values

In addition to adequate enforcement, individuals are more likely to comply if they value the good being produced (Levi, 1988). Therefore incorporating local values into the rules is an important means for the park authority to demonstrate that their commitment to local participation is credible. The results of this study highlight the importance of local values in determining the success of participatory schemes, regardless of the incentives used. Rather than simply being willing participators, people will cooperate if they perceive it to be in their best interest. For people to perceive that the relatively meager rewards available from participating in these schemes to be beneficial to them, either they must hold similar values regarding conservation or the forest must be of relatively minimal importance to them. Analysis of the goods most desired by local communities provides a useful indicator for determining the success of these participatory schemes.

Many community conservation projects attempt to provide subsistence use rights assuming that poor rural people desire these rights and if given, will therefore support the park. While the assumption people are angered at restricting local access is valid in many cases, the prescription nevertheless may still be flawed. People utilize forest resources for subsistence not because it is their most desired lifestyle, but because they lack alternatives. People desire a much better life than they are currently living. Not surprisingly, the overwhelming majority of people reported that conserving the forest was very important. From the policy analysis standpoint, a more interesting result than simply reporting that the forest is valued is identifying why people think it is important. Understanding why people value the forest is the key in determining the likelihood of different incentives to succeed. However, conservation policymakers often use such findings and extrapolate that local people will therefore support interventions that restrict most access to protected areas. This emphasizes the difference in conservation values between many policymakers and local people. While conservationists value the forest for existence value, preservation of biodiversity, regulation of climate and other ecosystem functions, local people often value the forest for its exploitable resources. Most survey respondents who didn't value the forest as very important, indicated that the low ranking was because they could no longer access the resources that they desired.

Survey results show that the overwhelming majority of people chose as most important products that were income generating, not for subsistence. Note that this total for subsistence use even includes activities such as pole cutting and hunting that are deemed too destructive to be allowed anyway. Even in Mpungu, where people previously had showed little interest in accumulation and improving their standard of living, they still valued activities that would provide them money, if for no other reason

than allow them to drink. Thus, although allowing people at Mpungu to collect basketry materials and medicinal plants is certainly appreciated compared to the alternative of completely restricted access, it is not likely to be enough to make people content. Because the products they really demand – gold, timber, cultivation rights – are not likely to be allowed within a national park. The limited organized resistance in Mpungu is a result of people realizing that it is now a national park, and thus there are certain activities that won't be allowed. At Mt. Elgon, the extension of activities that are being allowed to include usage beyond so-called minor forest products within the park has blurred the dimensions of whether it is a park or not, and has helped contribute to the difficulties faced by that park. The relative success of collaboration in Mutushet, thus is likely more determined by the circumstances that have led the community to not cut the forest in the first place, then the process of collaboration or the specific incentives that have been provided.

This difference in values is best expressed by the words of a local leader of Moyok parish. He interpreted the word *reserve* (as in forest reserve) to mean that the government is reserving the land for the people. Therefore, people should be able to use it as they choose. This interpretation differs markedly from the common conservationist definition of the land being reserved for present and future generations.

This divergence in values has serious implications for the potential of community conservation that extends beyond merely the likelihood that limited resource use will not likely be enough to satisfy local people. Perhaps more importantly regarding the potential for including more active local participation in decision-making is this assumption that if locals value the forest, they will work to protect it. But if they value it primarily for exploitation, given the opportunity to make rules, people in Mpungu would sanction timber harvesting and people in Moyok would overwhelmingly sanction cultivation. Although timber harvesting could potentially be regulated so as not to be overly damaging, permanent cultivation is clearly incompatible with a protected area as it transforms the forest and prevents many ecosystem services from occurring. Thus, as in Mpungu, any collaborative process begins with an agenda of options already limited, which thereby reduces faith that the effort in collaboration is genuine. Under such conditions, the hopes of moving towards the complete local control end of IUCN's continuum are unlikely. If it were not, local control could just be given, regardless of outcome. Rather, the goal of collaboration is to give as much control as will satisfy the objective of conservation.

Do People Want Control?

The rationale for active local participation, such as collaborative management assumes that the origin of people's displeasure with the park is that control over the land has been taken away from them. Therefore, a return of some managerial responsibilities will be welcomed by local communities and therefore an effective incentive to gain their support. However, results of the survey rankings revealed that more participation in decision-making was not desired nearly as much as the material benefits reflected in access to park resources and development projects. If people value the forest for exploitation purposes, regardless of where control lies, the potential for collaboration is limited. Of the people who are participating then, why are they participating? To get control for further exploitation, to guarantee the opportunity for individual benefit.

Additionally, a close majority felt that local people protecting the forest would be preferred to park rangers indicating that almost as many did not want to give local people greater control.

Although perhaps a poor example of collaborative management because of inadequate linkages with community members, the committee at Mutushet has been relatively successful at existing in a functioning form for as long as they have. For two years they have been holding monthly meetings fairly regularly and more interestingly, have been physically patrolling the forest. Although most members admit to aspirations of future personal benefits, hoping that if they do a good job they will be rewarded with a future salary, equipment such as boots or jackets or employment with the park, they also have developed a sense of community pride and ownership in the forest. By taking over patrolling responsibilities from the rangers, they have gone a major step in regaining some control. The notoriety that they have received, from being selected as a pilot parish, to receiving several visitors and researchers, has helped instill a sense of pride as Mutushet being the community that has protected the forest. Results from both surveys and interviews confirmed that the transfer of responsibilities of patrolling the forest and use rights of the forest has instilled, or re-instilled, a sense of community pride and ownership in the forest.

While the community has regained a sense of pride, it is unclear as to whether that will be enough for them to actively protect the forest. Members of the committee who patrol have been motivated primarily by the hope of future rewards from the park. As the park is not planning to give anything to them, allowing use is supposed to be their reward, it will be interesting to see how long the committee stays together. The committee at Mutushet has clearly become geared towards enforcement and is seen as part of the park management, both by committee members themselves and the local community. They perceive themselves as taking over the duties of the park rangers, and therefore act like rangers themselves. Their primary responsibilities are patrolling the forest, rather than educating the community, problem-solving or serving as a liaison between the community and the park. Committee members repeatedly request the park for payment, uniforms, boots, identification cards and other materials that would help identify them as rangers, rather than as community members. Community members meanwhile refer to them as “The Management”.

This is another example of local aspirations being viewed differently by conservationists. The people on the committee are hoping for some form of individual reward. Whether some payment, the potential to be hired as a ranger, or just some boots or raingear, committee members are hoping to get something out of it. Local people see the committee as a stepping-stone towards a better life. In isolated rural areas, such as the parishes bordering Mt. Elgon and Bwindi, with few formal jobs and limited access to markets, it represents a rare opportunity for, albeit limited, economic improvement, as well as a way to distinguish oneself from one's fellow community members. Rural communities are often full of individuals, who rather than looking for a way to help the community at large, more often than not are looking for a way to gain an advantage over a neighbor. This individual competition, which gains greater importance the more enclosed a community, is often overlooked by the designers of projects expecting an idealistic vision of societies oriented primarily towards altruism.

Finally, these results indicate the difference between empowerment of a local committee and empowerment of a local community. Even a relatively active local committee, such as at Mutushet, can be quite inactive in respect to interacting with the community at large. As decisions whether or not to comply with park regulations are made on an individual level, it is essential that incentives be put into place to encourage the local management committee to interact with all community members.

Conclusion

Results indicate that the two collaborative agreements specify different rights and responsibilities for local communities in the two parishes. In Mutushet, residents had valued the forest for its collective, as well as, private benefits. Providing residents some authority over decisions of access and monitoring the forest has revived a sense of community control and pride towards conservation of the forest that had been lost after successive generations of government control. In Mpungu, despite extensive input into the design of the rules, the failure to incorporate the primarily private extractive benefits towards the forest favored by community members has diminished the impacts of collaboration. Therefore, despite organizing local collaboration along existing self-help institutions, the new rights and responsibilities have not engendered these institutions to action in support of forest conservation.

These outcomes represent preliminary results and further study is needed. Nevertheless, this examination of community conservation initiatives in Uganda demonstrates the difficulty of organizing collaborative management agreements. Recognizing that environmental degradation occurs and that local people have been excluded from the decision-making process does not imply that giving them a voice will necessarily improve conservation outcomes. As the national park model has proven more successful in some situations than others, prescribing a universal participatory institution that can be effective in all situations is also unlikely. As evidenced by this study, the same rules can serve as incentives or disincentives depending on the values of local communities. Not all communities are interested in undertaking decision making and managerial responsibilities and not all individuals within communities are willing to participate. Moreover, individuals that do participate, do so for any number of reasons, which may or may not involve an interest in improved conservation. Therefore, collaboration is likely to be more effective when local community members value the collective good being produced. Thus, in designing community conservation programs, it is essential to examine not simply the incentives generated by the particular set of rules, but to examine the convergence between the rules in use and the values of local communities. By extending these findings to other studies employing institutional analysis, scholars can gain a greater understanding of the likely interactions resulting from different institutional arrangements.

These divergent results present important lessons for the potential of collaboration in conservation. By highlighting the importance of identifying the nature of the forest goods that are valued and the effectiveness of the collaborative process at incorporating these values into the design of participatory conservation institutions, this study has potentially important implications for scholars examining the motivations for human behavior and practitioners interested in improving community based resource management.

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