

Research Article

The Performance of Community based Forest Management in Tanzania: The Case of Selected Villages in Morogoro District

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Abstract: Community based forest management is one of the participatory forest management approaches practiced in Tanzania. This paper is based on the study conducted between November, 2008 and February, 2009 in selected villages of Morogoro district. It analyses the performance of community based forest management in selected villages, by considering both policy and practice. Five case study villages namely Fulwe, Kiwege, Muhungamkola, Bagilo and Tegetelo were selected. Six variables were assessed: cooperation; rule compliance; participation in decision making; rule satisfaction; credibility of monitors; and, success in rule enforcement. The study revealed that Muhungamkola and Tegetelo villages have succeeded in the management of village land forest reserves while Fulwe, Kiwege and Bagilo were found to have failed. Success observed in those two villages is attributed to a convincingly high level of peoples' participation in rule formulation, cooperation, compliance with rules, credible monitors and a highly decreasing trend of illegal activities. The opposite accounts for the failure observed in the other three villages. The study ends with two conclusions: (1) The findings indicate that the performance of monitors differs across the villages depending on the level of commitment, enthusiasm and incentives; (2) The project approach employed in implementing CBFM activities has no far-reaching outcomes, thus is not a sustainable solution to the deforestation problem in Tanzania.

Keywords: Community based forest management, village forest reserves

INTRODUCTION

Tanzania, like many other eastern and southern African countries, experienced a number of policy reforms most of which were geared towards devolving the management of common pool resources (Wily and Mbaya, 2001). Nearly everywhere, common pool resources have been massively reduced in modern times (Jodha, 1990). Privatization, encroachment and government appropriation have been the main processes taking resources out of common use (Luoga *et al.*, 2006). The introduction of Participatory Forest Management (PFM) was sparked by several factors, both international and local (Luoga *et al.*, 2006). At the international level, treaties and accords such as the Tropical Forest Action Plan (TFAP) sought to reverse the loss of forests through the involvement of stakeholders, especially adjacent communities (Luoga *et al.*, 2006). The original justification for increasing community participation in the maintenance of rural conservation projects stemmed from the need to better target peoples' needs, incorporate local knowledge, ensure that benefits were equitably distributed and lower management costs (Wily, 1997).

Community involvement in forest management in Tanzania entails mainly two concepts, namely Joint Forest Management (JFM) and Community Based Forest Management (CBFM). In JFM, the government is the owner but shares responsibilities and benefits with local communities, while in CBFM local communities are both owners and responsibility bearers (that is, owners, users and managers) (Wily, 1997). Currently there are over 400 declared Village Forest Reserves which are managed by villagers themselves under CBFM in Tanzania. This indicates that the devolution of forest management to local people has been successful and is an incentive for forest conservation and protection since the villagers have full ownership of the forest land. The Tanzanian governments in collaboration with civil society organizations have made substantial efforts to promote CBFM with the hope of reducing deforestation by local people.

All the CBFM initiatives, however, have used a "project approach" which is time bound and hence not sustainable. This has led to a setback of activities in villages after projects phase out and questions whether the communities are managing the forests in a

sustainable manner or not after termination of the respective projects. Deforestation is still happening in rural areas despite the fact that the villagers are the ultimate custodians of the village forests. Village Forest committees (Environmental Committees) are established and tasked the duty of monitoring forest use in a particular village. Such monitors are accountable to the village government and to the village at large. Monitors and users are expected to be good managers of their forests thus ensuring sustainable management. Instead, the forest resource base and forest land is deteriorating day after day. To rectify the situation, it is necessary to analyze the management capacities of the Village Environment Committees so as to know their strengths and weaknesses and hence identify solutions to improve management systems. This study analyses the performance of community based forest management in light of policy and practice. It aims to answer two questions: Does cooperation and rule compliance determine success in village forest management? And, what influence does participation in decision making; rule satisfaction and credibility of monitors have on rule compliance?

METHODOLOGY

Study area: The study was conducted between November, 2008 and February, 2009 in Morogoro district, Tanzania. The District is situated in Morogoro region, about 180 km from Dar es Salaam, the business capital city of Tanzania. It lies along latitudes 6-8° south of the Equator and Longitudes 37-39° East of the Greenwich Meridian Morogoro District Council (MDC, 2002). Morogoro Municipality is inclusive, thus the district is composed of urban and rural precincts. The District borders Tanga region in the North, Coast region in the East, Kilombero district in the South and Kilosa district in the West. The study was conducted in a rural precinct in which five villages located in three wards were selected. The villages included Fulwe, Muhungamkola, Kiwege, Bagilo and Tegetelo. Fulwe and Muhungamkola are located in Mikese ward, Kiwege in Ngerengere ward while Tegetelo and Bagilo are located in Tegetelo ward.

Data collection: The following methods were used.

Household interview: A questionnaire survey was employed whereby households were visited and interviewed. The number of households interviewed in each village was 25 except Fulwe village in which 40 households were interviewed.

Key informants interview: Members of the village council including the village chairman and the village executive officer and members of the village environmental committee were identified as key informants. A set of structured questions were used to guide the interview.

Direct field observation: This involved observing and noting all events that happened during the research study. It helped to learn about the social cohesion of the villages, socio-economic situations and the conditions of the village land forest reserves. Much of the data collected were qualitative but were used to augment the quantitative data collected through the questionnaire survey.

Data analysis: The household interview data were analysed using the Statistical Package for Social Sciences (SPSS) and Excel. Unlike quantitative data, qualitative data are difficult to distinguish between data collection and data analysis, for instance the qualitative data from the key informant interview and direct field observation were analyzed on the spot and helped to make further inquiries in the course of the study. The qualitative data also helped in the discussion of empirical findings.

RESULTS AND DISCUSSION

The main aim of the study was to analyze the performance of community based forest management in light of policy and practice. Tanzanian Forest policy and other relevant national policies provide avenues for villages to exercise their freedom, power and discretion to manage village land forest reserves. However, implementation of the policies seems to find some bottlenecks. Depending on the nature and extent of forest education offered to villages coupled with the socio-economic and socio-cultural background of particular villages, adoption of CBFM principles is skewed, thus suggesting a discrepancy between policy and practice. This has been evident from the case study villages in which differences in forest management performance have been explored. Six main variables were investigated: cooperation; rule compliance; participation in decision making; rule satisfaction; credibility of monitors; and, success in rule enforcement. Table 1 summarizes the results.

Cooperation is the centerpiece of any collective action arrangements. CBFM requires village members to cooperate in order to make it operational. Empirical evidence indicates that cooperation was skewed across the case study villages, suggesting that there are both cooperative and non-cooperative individuals. Muhungamkola and Tegetelo were found to have high levels of cooperation and there were low levels in Fulwe and Bagilo, while Kiwege proved to completely lack cooperation in forest management activities.

As a result of cooperating and non-cooperating situations in the villages, differences in performance on forest management were also observed. Muhungamkola and Tegetelo have cooperative members thus smoothening the forest management task and this leads to good performance. With the cooperation accorded by village members, monitors have been able to reduce illegal activities to a larger extent (Morogoro District Council). Village leaders are also committed and willing

Table 1: Summary of findings

Variable	Response	Fulwe (N = 40) (%)	Kiwege (N = 25) (%)	Muhungamkola (N = 25) (%)	Bagilo (N = 25) (%)	Tegetelo (N = 25) (%)
Cooperation	No cooperation	5	16	0	0	0
	Low	25	64	0	28	8
	Medium	55	20	8	40	40
	High	15	0	92	32	52
Rule compliance	Poor	10	36	0	4	12
	Moderate	40	28	16	16	12
	Good	30	24	28	32	24
	Very good	20	12	56	48	52
Participation in decision making	Participated	62.5	44	92	88	76
	Not participated	37.5	56	8	12	24
Satisfaction with rules	Not satisfied	12.5	32	0	0	0
	Partially satisfied	25	28	4	4	4
	Satisfied	45	32	28	24	36
	Very satisfied	17.5	8	68	72	60
Credibility of monitors (assertion to dissolve incumbent monitors)	Strongly agree	5	56	0	20	4
	Agree	5	16	8	8	4
	Undecided	15	4	8	20	8
	Disagree	2.5	8	32	40	20
Success in rule enforcement	Strongly disagree	72.5	16	52	12	64
	Unsuccessful	7.5	52	0	0	4
	Average	12.5	36	20	32	16
	Slightly successful	47.5	8	24	28	24
	Very successful	32.5	4	56	40	56

to support forest management activities. The forest condition in both villages is very promising. The forests have regenerated and continue to regenerate. Both Ngong'olo and Kila forests in Muhungamkola looked healthier with tree canopies performing well. Tegetelo Ugulo forest seemed stocked with healthy timber species, fruits species and other non-wood forest products. The forest boundary is well delineated with healthy teak trees. The boundary is much respected as there were no signs of encroachment.

Fulwe, Kiwege and Bagilo were found to have relatively poor performance in forest management which is attributed to poor cooperation. Cooperation may be ensured either voluntarily or by force. Forced cooperation makes an individual cooperate in fear of punishment or in return of some benefits. In the case study village's cooperation was effected as a matter of cultural and moral obligation but expressed as a voluntary activity.

Achieving a meaningful level of cooperation in community based activities is not an easy task given the fact that in a community there exists a wide spectrum of heterogeneity among community members. Wealth ranks, level of education, ethnic groups and perceived importance of forest management activities influence one's decision to cooperate. These aspects were not dealt with during this study. They, however, remain as good indicators in investigating the cooperative capacity of individuals in a community. Nevertheless, the study tried to get a glimpse on the level of cooperation through peoples' perception and thus analyzing reasons for such observation.

Incentive for cooperation is another aspect that may help explain the observed levels of cooperation. Individuals will decide to engage in any community activity after undertaking a cost-benefit analysis to

weigh up the advantages and disadvantages of cooperating and not cooperating. According to game theory (Turocy and Von Stengel, 2001) there exists a social dilemma among individuals working under collective arrangements. Such dilemmas emanate from individual strategic behaviors that aim at maximizing individual payoff at the expense of others. Some individuals may develop behaviors that uplift the collective payoff and forsake individual benefit.

The study investigated the level of rule compliance so as to determine the likelihood of success in rule enforcement and thus success in forest management. Rules are not always self-enforcing and hence their enforcement cannot be taken for granted while the rule compliance situation in Muhungamkola and Tegetelo was promising, there existed problems in Fulwe, Bagilo and Kiwege. The situation was even worse in Kiwege, in which almost all village members did not seem to comply with the rules. They illegally harvest forest products from the designated village land forest reserve which according to the key informants was supposed to be closed for a period of 10 years.

Compliance of village members with rules signals a trend that will lead to the reduction of illegal activities thus safeguarding the village forest reserve and in so doing, will enhance the success of the monitors. Rule enforcement is an intricate task that requires dedication, commitment and advocacy skills from the monitors. Depending on the behaviors of the users, the transaction cost of rule enforcement may be high and thus disappointing to monitors. Therefore, compliance of users with rules reduces the transaction cost of rule enforcement and eventually success in managing the forest.

Rule compliance is the most difficult aspect in the institutional economics of any undertaking. The majority

of theories of compliance fall under the general rubric of rational choice theory, whereby humans are seen as rational agents who behave in accordance with known preferences, choosing strategies conducive to their realizing the most desired outcomes (Horning, 2000). In daily life, governance systems are often based in central government or local government, where rules are successfully formulated. However, such rules find tough moments when it comes to implementation. Some people will comply with rules while others will not. Compliance may be voluntary or forced. In most cases, voluntary compliance is highly encouraged and it is seen as a sign of high moral maturity. Forced compliance comes in when voluntary compliance is not affected. For example, some village members voluntarily do not harvest any forest product in the village forest reserve because they know that it is prohibited. However, those who may go to the forest to harvest some products illegally, when caught and punished, will be forced not to go again into the forest. Forced compliance was proposed by Hardin (1968) as a solution to the tragedy of the commons situation. Economic models of compliance suggest that individuals subject to regulatory constraints act rationally so as to maximize the material gains obtained from complying (or not complying) relative to the costs of their course of action (Horning, 2000).

Participation in decision making entails actively engaging in village meetings which make various decisions relating to the designation of the village forest reserve and formulation of forest use rules. It was observed that in some villages where participation was found to be high, high level of compliance was reported and vice-versa. This is due to the fact that people's participation in decision making (including rule formulation) promotes mutual understanding in the decisions made thus making people satisfied with rules, a situation that facilitates rule compliance. Kiwege had a very low rate of participation in decision making proportionate to a very poor situation of compliance with rules. Tegetelo and Muhungamkola had high rates of participation which therefore accounted for high rates of compliance. Fulwe and Bagilo suffered a compliance problem despite the fact that they had relatively high rates of participation.

The fact that the observed high participation of village members in decision making in Bagilo and Fulwe did not translate into high levels of compliance raises some doubts. It is also contrary to the literature on collective choice and resource management which suggests that participation of resource users in formulation of resource use rules will enhance compliance with rules since the users themselves have participated in making decisions that affect them directly (Agrawal and Ostrom, 2001).

Participation has many forms and meanings. Some village members participate simply by attending the meetings, but they don't contribute anything in the

meetings. It was observed that some people, especially women and a few men, participate in village meetings merely by attendance. They don't voice their opinions over the issue under consideration. This may lose the true meaning of participation. Some complained that they don't speak out their opinions because they are not given a chance to speak, while some said they don't have anything to contribute while in the village meeting. Once decisions are made, most of the members including those who attended the meeting dispute them, claiming not to be satisfied with the decisions. This may be attributed to poor moderation of the meetings due to a lack of facilitation skills by village leaders, particularly on how to articulate the principles of participation in village meetings. For example, it was learned that in Fulwe village most of the convened village meetings were characterized by disputes and chaos. This was because the village leaders were dictating some of the decisions; they were always defensive when asked about various issues pertaining to village development including forest management. Such a situation has led to failure of village leaders to convene regular village meetings in fear of disputes. Under this environment, participation of village members in decision making remains in peril. Looking at the CBFM institutional arrangements, it recommends the levels of participation suggested by Arnstein (1969) and Hobley (1996). Local people have full control and decision power on how they should manage their forests. However, local leaders may jeopardize the spirit of participation if they cling to dictating decisions and uplifting elitist attitudes towards the village members.

The most contrasting feature that is unique to Muhungamkola and Tegetelo is the congruence between people's willingness to participate in rule formulation and their compliance with such rules. As pointed out earlier, participation of resource users in creation of the use rules is pivotal for successful compliance and rule enforcement because it provides a sense of dignity and moral responsibility to users. They feel recognized and valued as key players in the game. It also helps convey information to all players so that they dance to the same tune, thus reducing the transaction cost of monitoring. Village leaders are committed to fulfilling the democratic process of making decisions, a quality fundamental to good governance. Village members' satisfaction with the rules has an implication on compliance; a dissatisfied individual is more unlikely to comply with rules. Among other factors, low level of participation in rule formulation coupled with dissatisfaction with rules render compliance in Kiwege difficult. Fulwe also had a higher number of dissatisfied people which suggests a reason for very low compliance. Bagilo was found to have high level of satisfaction with rules, yet rule compliance was not satisfactory.

Although rules in principal contradict the pursuit of one's individual gains, their creation needs a conducive environment that enables dialogue and consensus building so that the ideas and opinions of participants are taken on board; a failure of which leads to the dissatisfaction of participants. Tegetelo and Muhungamkola maintain relatively high levels of peoples' satisfaction with rules. People who participate in rule formulation are also satisfied with the formulated rules. This may be attributed to their high awareness on forest management issues, people's enthusiasm to manage forests for longer term benefits, commitment of village leaders and good governance. Therefore, compliance with rules in Tegetelo and Muhungamkola was found to be very good because village members participated in the formulation of rules and were satisfied with the rules.

Credibility of monitors is another factor that was assumed to influence compliance. Credible monitors were found to have the trust of the village community. Fulwe, Tegetelo and Muhungamkola were found to have high trust in monitors while Kiwege and Bagilo showed low trust. Mistrust in monitors observed in Kiwege is ascribed to corrupt activities of the monitors and a lack of coordination in their activities. The operational rules were formulated, but they are just on study and there is no attempt to enforce such rules. According to the Village Executive Officer, there are a lot of illegal activities going on, some of which are done by monitors themselves. They are not responsible and accountable to the village members who elected them. Meeting of the committee members has been very difficult. For example until December 2007, they have managed to hold only one meeting. In Bagilo, the low trust in monitors can be attributed to the decline in frequency of conducting committee meetings and patrol activities. This was as a result of the termination of a project by the Wildlife Conservation Society of Tanzania (WCST) which lasted for about 7 years in Bagilo and Tegetelo. The project provided some incentives to monitors, they were paid some allowances to facilitate their meetings and patrol activities. Thus, after the project was phased out, monitors became inactive.

Monitors are regarded as role models when it comes to compliance with rules, just as it is conventionally accepted that "policemen" are role models in keeping national laws. Depending on how the monitors behave and perform their monitoring duties, their credibility can be assessed by the village members and from this assessment one can conclude either to trust or mistrust them. Such a judgment has an implication on the way one will comply with rules, especially for voluntary compliance. It will be difficult for an ordinary village member to comply with rules if he/she learns that monitors are involved in the breaching of the rules which

they were supposed to protect. A study by Rhodes and Wilson (1999) suggests that the ability of leaders to foster trust and cooperation is dependent on the reputation and behavior of leaders themselves. They further argue that if leaders are going to be effective two things must happen. First, leaders must convince followers that leaders can be trusted. This means that leaders have to be credible and they have to build a strong reputation. Where a leader's reputation for trust is strong, then in most circumstances, it will be credible. However, where the leader has little reputation, then credibility is crucial, the leader's perceived competence is a powerful signal of credibility. Ostrom (1999) in her design principles of enduring Common Pool Resources (CPR) institutions argues that monitors, who actively audit CPR conditions and appropriator behavior, are accountable to the appropriators or are the appropriators. The emphasis put here is on the role of monitors and what is expected of them. If monitors lose their credibility, the appropriators may decide to dissolve them.

CONCLUSION

The aim of this study was to analyze the performance of community based forest management in Tanzania, with a focus on selected villages in Morogoro District. The empirical findings may however be extrapolated to other parts of Tanzania. Monitors play a key role in the management of the village forest reserves. The following conclusions can be made from the findings:

- Depending on the level of commitment, enthusiasm and incentives, the performance of monitors differs across the villages.
- In villages where a CBFM project has been operating for a relatively long time, success in forest management was reported. However, the success was not sustained after the project was terminated most of the forest management activities stopped after the project phased out.
- Looking at the level of cooperation in forest management activities and compliance with forest use rules, it was learned that in villages where the performance in forest management was poor, village members had no interest to manage and conserve forests.

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