

Potential for community-based forest resource management in Uganda: The case of non-gazetted forests of Hoima and Masindi Districts, western Uganda

A. Y. Banana and T.G. Turiho-Habwe¹

Department of Forestry, Makerere University, Uganda

¹Department of Agricultural Economics, Makerere University, Uganda

Abstract

Uganda's forest resources are important for the country's growth and development. Though there is in place a mechanism for controlled use of gazetted forests, lack of an organised management institution has left common pool non-gazetted communal forest resources at the helm of uncontrolled use. The study covered the districts of Hoima and Masindi where non-gazetted communal forest resources are abundant. The overall objective of this study was to identify a tenure system that can lead to sustainable use of communal forest and tree resources by the local people and seek people's attitudes towards increased involvement in the management of natural resources in their localities. The respondents in both Masindi and Hoima overwhelmingly rejected the idea of leasing the forests. Loss of access rights to the resource was cited as a major reason for rejecting this form of tenure. The communities preferred to own the resource in common, thus advocating for a common property tenure. It was therefore recommended that non-gazetted forest resources be left to the local user groups to manage through a locally composed and constituted community association with assistance from the Forest Department.

Key words: Common property, joint forest management scheme

Introduction

The governance of natural resources used by many individuals in common is an issue of increasing concern to policy analysts. State control, privatisation and, of recent, joint management of resources have been advocated. Uganda has a multiplicity of tenure systems which has led to confusion and insecurity in resource ownership (Marquardt 1994, personal communication). Use of non-gazetted forested areas in Uganda is often communal. Individuals do not have exclusive rights to discrete areas of the forest, as compared to farm land. Even under shifting cultivation, the rights of the individual farmer are usually clearly defined.

When there is land shortage, common pool resources such as forests, wetlands and grazing areas rapidly decrease in both size and quality. For example, individuals bring pieces of communal forest land under their personal control for arable purposes by the usual process of starting to cultivate it. Communal forest areas are not vested in any authority which would prevent such encroachment.

How can common pool resources be managed and exploited in a way that avoids both excessive consumption and high administrative costs? The issue at hand is how best to limit the use of natural resources so as to ensure their long-term economic viability. Some scholars

recommend that the 'state' should control most natural resources to prevent their destruction (Runge 1992), while others recommend that these resources should be privatized (Bromley 1989). However, experience has shown that neither state control nor privatization has been uniformly successful in enabling individuals to sustain long-term productive use of natural resource systems (Ostrom 1990). On the other hand, there are some communities, who have relied on institutions resembling neither the state nor the market to govern some resource systems with reasonable degrees of success over long periods of time. According to Bromley (1989), there are three categories of property regimes: state property, private property, and common property under which resources can be held.

Common property is shared private property (McKean and Ostrom, 1995). Property rights in a common property regime are exclusive to the co-owners (members of the user group). Consequently, common property regimes provide the means of privatizing rights to a resource without dividing the resource itself. Such a regime is desirable because the resource system is most productive when it is managed as an intact whole rather than in small units. Communal ownership of forest resources is also a viable option when a large number of individuals in the community use that particular resource.

Justification for the study. During the debate on land tenure reform (Marquardt 1994), there was an expressed desire to vest ownership of communal forest resources to local authorities. However, there was a need to determine which existing local institutions or possible institutional arrangements that are more likely to manage these resources sustainably. Efficient management of these communal forest areas is essential so as to reduce the rate at which they are being degraded. Allowing these resources to be dissipated would bring considerable hardship to the rural communities who depend on them for provision of goods and services. The overall objective of this study was therefore to identify a tenure system that can lead to sustainable use of communal forest and tree resources by the local people. Specifically, the study aimed at determining local communities' attitudes on the different categories of tenure regimes under which non-gazetted forest areas could be managed, and the peoples' willingness to participate in managing forest resources in their localities. This information is needed in order to develop appropriate policy initiatives for the control and sustainable utilisation of these resources.

Methodology

The area studied in Masindi District covered the stretch along Nyamagita Forest in Budongo sub-county while the area studied in Hoima District covered the stretch along Sangwe and Kyamugongo Forests in Kitoba sub-county (Appendix). These areas were chosen on the basis of the following:

- these districts have fairly large areas of communal forest resources;
- these forests are extensively used by the local communities;
- they have diverse historical settlement periods: Hoima has the longest and most stable settled community while Masindi has intermediate settlers, were until recently, unstable settled communities;
- the Hoima site is settled by a homogeneous community while the Masindi site is settled by a heterogeneous community; and
- some of the forests in the study areas appeared to be sustainably utilized by the local communities while others are being degraded.

Nyamagita Forest is a natural communal tropical rain forest. Adjacent to it and in the same ecological watershed is Muzinduki private forest. Both forests are part of Budongo Forest ecosystem. They are riverine, medium-altitude, moist semi-deciduous forests. Both forest patches are used by the nearby villages (settlements) of Nyamagita, Bwinamira, Bulyango, Kyamongi and Nyabigoma. At the time of the study, there were approximately 400 households with a total population of 2,500 people.

Sangwe Forest in Hoima district is a natural, communal tropical high forest. Adjacent to it, is the Kyamugongo Government Forest Reserve. Both forests are also part of Budongo forest ecosystem. They are riverine, medium altitude, moist semi-deciduous rain forests with closed

canopy along the Sangwe River, a tributary of the Hoima River which drains into Lake Albert in the western rift valley. Both forests are utilised by the residents of Mpunda, Birungu, Kitembeka and Kihamba villages. At the time of study in 1995, there were about 420 households and 2,500 individuals.

In two villages, at each site, a Participatory Rural Appraisal (PRA) was first conducted. The PRAs typically lasted 14 days and provided core information around which other activities took place. The attributes of the community were obtained during the meetings with the men, women and children of these villages. In addition, follow-up focus groups and more in-depth discussions were held on topics identified as issues in PRA meetings. These focused discussions were held with forest officers, local council members, forest owner and user groups.

Following the PRA, a household survey was conducted and questionnaires were administered to 405 randomly selected households (from a household list of each village). A household survey was carried out to gather standardized information that could be systematically compared and analysed across communities and sites.

Data was gathered on such variables as size of land holdings, gender of household head, level of education of household head, ethnic backgrounds, and size of household with the view that such socio-economic backgrounds easily affect attitudes about common pool resource use and management.

Logistic regression was carried out to test whether 'opinion' responses were dependent on specific socio-economic factors and to test for significant differences between particular variable categories.

Results

According to the results, Masindi (72.8%) and Hoima (76.5%) respondents agreed that they would participate in communal resource management (Table 1). In response to the statement that there was a traditional institution in place managing the forest resource, the respondents were overwhelmingly negative. The lack of traditional resource management institution was a result of many decades of centralized control of forest resources, with limited participation of the local people. This arrangement did not only disempower the community-based resource management institutions, but also led to their devaluation and disintegration.

The respondents in both Masindi and Hoima overwhelmingly rejected the idea of leasing the forests. Loss of access rights to the resource was cited as a major reason for rejecting the idea of privatizing. The second reason cited was that the poor people would be marginalized as they would be unable to lease these forest patches. Some respondents had already experienced the repercussions of private ownership of the forest, where accessibility to using certain resources like poles for construction work was already lost. The people were also aware that the private owner is likely to convert the forest into other uses, depending on the prevailing market conditions. Conversion of tropical high forest with low economic returns to eucalyptus plantation was often

mentioned as one reason for rejecting the idea of privatization. In such cases, the community would lose the benefits they ordinarily derive from the tropical high forest. As a result, the majority in Masindi (87.3%) and Hoima (76.0%), agreed to the protection of the forest and almost a similar number of respondents were even ready to pay for any maintenance costs involved.

From the results, it was clear that the population did not favour privatisation of the resources, but instead preferred to own them in common. Approximately half of the respondents in Masindi and 72.5% in Hoima consented to the idea of forming a local forest association to manage the forest on behalf of the community. The respondents insisted that the association be formed only by the communities that use the resources. However, the respondents did not agree on whether such an association should be formed in each local council or whether all local councils using a single forest should form one association. In Masindi only, 19% of the respondents wanted all local councils using the same forest to form one association while 27.8% preferred each local council to form its own association.

In Hoima, only 13% of the respondents wanted one association to be formed by all the local councils using the forest while 57.5%. Communities preferred that forest resources be controlled at the lowest level of administration. Whether such a small unit of administration would have the capacity to manage these resources and

enforce the by-laws was doubtful. In addition, it would be very difficult to co-ordinate the numerous associations managing the same forest resource.

The results of willingness to participate in communal resource management were reached after data were analysed amongst various socio-economic factors. The *a priori* expectation was that there would be a significant relationship between age, household income, sex and commitment to the principle of communal resource management. The Chi-square (χ^2) analysis of relationships indicated that there was a significant relationship between willingness to carry out community resource management and age ($\chi^2 = 13.5$, $df = 2$, $P = 0.001$); sex ($\chi^2 = 13.6$, $df = 1$, $P = 0.001$); and income ($\chi^2 = 14.8$, $df = 2$, $P = 0.001$).

The young were more keen to be involved in communal management than the aged. Most female respondents were unwilling to get involved in forest resource management. Many of them were of the view that resources are owned by men and could be managed by them. Formal employment was not significant ($\chi^2 = 0.92$, $df = 1$, $P = 0.62$), indicating that employment did not influence one's decision to participate in communal management.

The results also indicated that there was a significant relationship between willingness to carry out community resource management and the time each household had to commit to this activity. More respondents were willing to participate in communal resource management as the time required to work in the forest decreased. As expected, labour was a limiting factor as it had to be shared between many other activities such as tending individual gardens.

In addition, chi-square tests were carried out to determine whether communities with on-going communal projects were more willing to participate in communal forest management activities than those communities with no on-going communal work. The *a priori* expectation was that communities with a past history of working together on communal basis would be more willing to manage the forest resource on a communal basis. In Masindi, more respondents had previously engaged in communal activities than in Hoima. Thus, significantly more respondents in Masindi were willing to participate in communal management of the forest resources ($\chi^2 = 5.63$, $df = 1$, $P = 0.05$) than in Hoima ($\chi^2 = 3.04$, $df = 1$, $P = 0.21$). Although the population is more heterogenous in Masindi than that in Hoima, different ethnic groups tended to settle in clusters and often carry out numerous activities together.

In case the management was successful and the local communities started realizing proceeds from their management efforts, 75.9% and 82.5% of the respondents in Masindi and Hoima, respectively, supported the idea of using the income earned to start development projects in the area such as schools, health clinics or protect wells rather than the other immediate alternative of sharing revenue in the form of cash. They also agreed that local government should take 25% of the proceeds realised each year, although this was the view of about 51% of the respondents. The remaining group supported the idea of sharing the proceeds with central government while others thought that government should take a bigger proportion. When asked how much they would be willing to contribute for the maintenance of the forest as some form of

Table 1. Summary of farmer response to communal management issues used in analysis by district (%)

Statement		District	
		Hoima	Masindi
Willing to manage:	No	25.9	23.0
	Yes	72.8	76.5
Local management organisation present:	No	98.1	99.5
	Yes	1.9	0.5
Need for forest association:	No	44.3	27.5
	Yes	51.3	72.5
How association should be formed:	all villages form one association;	19.6	13.0
	each village form own association based on user groups	27.8	57.5
	Others	1.9	2.0
		1.9	0.5
Should forest be leased:	No	74.7	78.5
	Yes	18.4	21.0
Why not lease:	Loss of access	53.2	70.5
	Other	21.4	9.0
Protect forest:	No	12.0	23.5
	Yes	87.3	76.0
Willing to pay:	No	16.5	12.0
	Yes	81.0	87.0
Revenue for project:	Yes	16.5	17.1
	No	75.9	82.5
Government share 25%:	Yes	44.3	40.5
	No	46.2	58.5

investment, about 80% of respondents were willing to pay Ug.shs.10,000-20,000/= per year. This showed that the local communities were willing to pay for the management of the forests although they might be constrained by the overall income at their disposal.

Conclusion

It is well established that instability and corruption of many governments in developing countries either make the state ownership politically risky or in many cases, the resource in question is too insignificant (as in the case of non-gazetted forests) to the state to motivate it to avert overuse (McCay and Acheson 1987). The study has presented findings to support the assertion that local people are willing to voluntarily manage the forest resources in their areas or contribute to the cost of forest maintenance. A significant number of them are ready to offer patrol services and report rule breakers.

The findings show that there are no local organisations in place to oversee use of non-gazetted forest resources and that there is overwhelming support of the idea of forming local associations, comprising local user groups at village administrative level to manage these resources.

The regression analysis established gender, age and income as socio-economic factors directly affecting the willingness to manage a resource held in common. Past participation in communal activities also significantly affected the farmer's decision to participate in community forestry activities.

Recommendations

It is suggested that formation of Joint Forest Management schemes (JFMs) between the local communities (resource users) and the forest department may be a necessary first step in empowering rural people and their institutions so that they may better contribute to sustainable management of their resources.

If the concept of Joint Forest Management is acceptable to government, the Forest Department together with the district authorities should assist in the formulation and establishment of these forest associations. The level at which forest associations can be formed should depend on the size of the forest. A woodlot located in one village could be managed by an association formed at village level while large forested areas with regional and national interests would be managed by an association formed at a

higher level but with local branches in the various villages using that particular forest.

It is further recommended that the land title on which the communal forests are located could be issued to the associations with an encumbrance that the land remains under natural forest cover. The lease to the registered association(s) should be for a specified period of time, with a possibility of renewal if the association has in that period managed the resource sustainably.

Acknowledgements

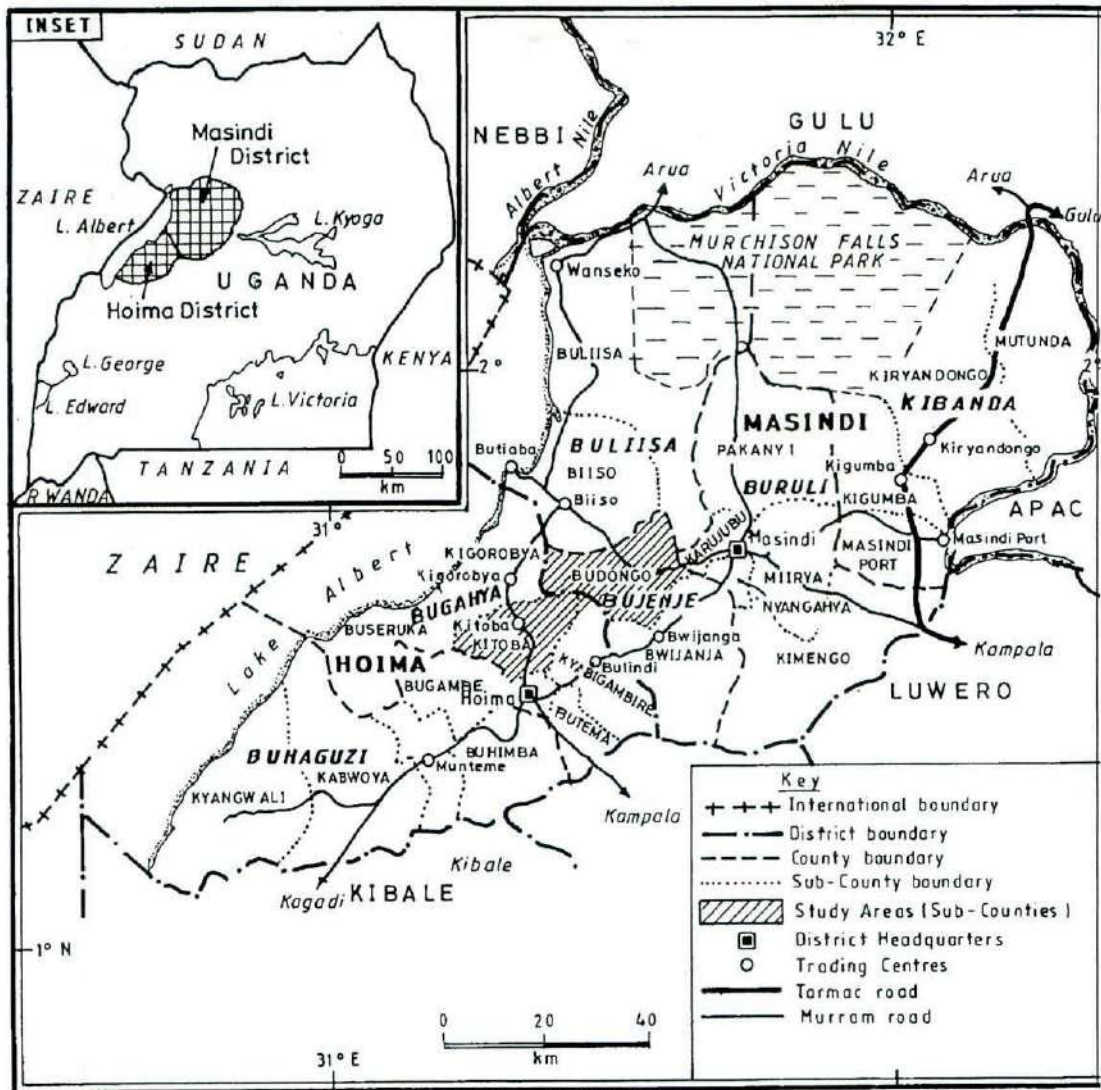
We thank the residents of Nyamagita, Bwinamira, Bulyango, Kyamongi and Nyabigoma in Budongo Sub-county, Masindi district and the residents of Mpunda, Birungu, Kihamba and Kitembeka villages in Kitoba Sub-county, Hoima district for taking time to answer the numerous questions needed to complete this research.

Funding for this study was provided by USAID under the Land Access Project executed by Makerere Institute of Social Research and the Land Tenure Centre of the University of Wisconsin at Madison, U.S.A.

We are specially grateful to Dr M. Marquardt of Land Tenure Centre and Land Access Project leader who gave us the opportunity to carry out this study. Thanks also go to Mr J. Okidi from the department of Agricultural Economics, University of Wisconsin at Madison, who was a member of the research team.

References

- Bromley, D.W., 1989. Property relations and economic development: The other land reform. *World Development*, 17: 867-877.
- McCay, B. and Acheson, J., 1993. *The Question of the Commons: The Culture and Ecology of Communal Resources*. Tucson: University of Arizona Press, 1987.
- McKean, M. and Ostrom, E., 1995. Common Property regimes in the forest: just a relic from the past? *Unasylva*, 46(1):3-15.
- Ostrom, E., 1990. The Evolution of Institutions for Collective Action. In: *Governing the commons*. Cambridge University Press, pp.1-28.
- Runge, C.F., 1992. Common property and collective action in economic development. In: W. Daniel Bromley (Editor), *Making the Commons Work: Theory, practice and policy*. Institute for Contemporary Studies. San Francisco, California 1992, pp.17-39.



Appendix 1. The location of the study areas in Masindi and Hoima Districts

