# Conflicts in Forests Use: The Role of Institutions

by
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**Introduction**

Sustainable utilization of forest resources is a key component on forest management agendas worldwide. Forests are important not only for consumptive purposes such as the extraction of timber but also for non-consumptive purposes. They have many aesthetic, recreational, economic, historical, cultural and religious values. Despite the important role they play, many of these forests are disappearing at an alarming rate.

With growing reduction in forest resources, forest user groups are often exposed to increasing conflicts arising from the multiple uses and user disagreements. The issue of conflict and its management or resolution has therefore attracted particular attention in recent years (Arnold 1998) with resultant proliferation of literature on the subject. The literature, so far has provided definitions of the concept (Blalock 1989; Gulliver 1972), case studies to illustrate the concept (Ross, 1993; Ross 1994; Scott 1998), and discussions of the conditions conducive to conflict (Ross 1993; Blalock 1989). Very little empirical analysis has, however, been conducted on conflict in forest use at local level.

The lack of analysis is attributable to the paucity of data. This problem is exacerbated by the ambiguity of the definitions offered so far and the failure of use of a proper framework to analyse conflict situation. In this study the Institutional Analysis and Development (IAD) framework is used to address some of these problems. The IAD framework is used to find out what rules and rights exist in the action arena and how conflicting rules systems may or may not result in rule breaking and or conflict, which ultimately affects the way the forests are used and managed.

The concepts of rights and rules are central to the analysis of conflicts in this paper[1]. The central questions in this analysis are: do conflicting objectives and rule systems in resource use result in more conflicts among users of forest resources? If so, what are the

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[1] **Rules have been defined by Crawford and Ostrom (1993) as prescription, which define the actions that are required, prohibited and permitted and the resultant sanctions that are authorized and can occur if the rules are not followed.**

resulting impacts on the forest resource? At the beginning of the study it was **expected** that forests with more conflicts in objectives and conflicts in rules used in the extraction of resources would have more conflicts among user groups and would be more degraded. The findings of the paper confirm this.

Although conflict can be examined at several levels, this paper will limit itself to to operational level situation as described by Ostrom (1990)[2]. The term conflict is used to mean situations involving some incompatibility of roles, interest and /or rules. As an example, logging may be inconsistent with other uses of the same trees. Disputes on the other hand involve appeal to some other actor beyond the subject of the complaint (Gulliver 1972) and are based on the assertation that the subject has violated some well-recognized rule or norm[3].

Looking for evidence of conflictual structures, the study uses data collected over time under the International Forestry Resources and Institutions (IFRI) research program. The program is a multilevel, multi-country, over-time study of forests and institutions that govern, manage, and use the forests. This study focuses on one country and uses data collected by scholars at the Uganda Forestry Resources Institute (UFRIC), Makerere University, one of the collaborating research centres for IFRI. The data were collected in two parts in accordance with IFRI protocol (Ostrom 1998). One part involved collecting data about the social attributes while the other involved data collection about forest attributes. Data on social attributes were collected using the participatory rural appraisal (PRA) methodologies, group discussions and individual interviews with Local Council (LC) officials and the invited residents. Forest data were collected using a random sampling technique of circular concentric sample plots. The location of the plots in the

[2] At this level of analysis, the assumption is that the rules and physical, technological constraints are given and will not change during the time frame of analysis and that the actions of individuals at this level directly affect the physical world.
[3] Conflict has been distinguished as more basic and often highly diffuse between two or more parties whereas a dispute is a particular issue over which one or more parties take action. In practice however, the boundary between the two is not clear and more often that note the terms are used interchangeably (Ross 1993).

forest was based on coordinated random numbers. Once the center of a plot was located, three concentric circles were marked. In the inner circle (1 m radius), the amount of ground cover by herbs and seedlings was estimated. In the middle circle (3 m radius), shrubs, and tree saplings were identified, their heights estimated and stem diameter at breast-height (DBH) measured. Saplings were defined as young trees with a maximum stem diameter greater than 2.5 cm, but less than 10cm. In the outer circle (10 m radius) trees were identified, their DBH measured and total heights estimated.

The paper is organised in this manner. The first part of the paper lays out the theoretical background to conflict, its management and resolution. Within this section a brief description of rules and how they are related to conflict is also given. This is followed by brief background to the study. Next, the IAD framework is presented and used as a tool to identity relevant issues to explore, particularly those related to rights, rules and their influence on conflicts in the use of Namungo and Lwamunda forest. This in turn is followed by a discussion of the types of conflict prevalent in these forests. Finally, a section on issues and implications is given followed by the conclusion.

**Theoretical background**

There are many theories of conflict -some of which are wholly developed while others are only partially developed[4]. One of the fully developed and commonly used theories in understanding conflict at societal level is the social structure conflict theory (Ross 1993). Underlying the social structural conflict theory is the argument that the organization of society creates specific interests that determine who disputes and who cooperates. This theory uses the structure of the society to understand what causes conflict in a given society, who is likely to initiate conflict with whom based on the society's pattern of subsistence, organization of authority and presence of arenas for conflict resolution. Furthermore, the theory can be used to understand how once conflict begins it is likely to develop (Ross 1993). Looking at the foundation of this theory it can be noted that the

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[4] **For more details on these theories see Ross (1993).**

IAD framework that has been used by many scholars **at** the Workshop for **Political Theory and Policy Analysis at Indiana University, can be usefully employed to understand conflict.

Several authors have argued that conflicts or disputes arise within a range of pure competitiveness from where interests in the outcome are, or seem to be, opposed to pure cooperation to where parties are willing to find an outcome in their common interest (Boulding 1962; Dukes 1996; Follett 1940; Gulliver 1979; Ross 1994). According to Ross (1993), most incidences of conflicts occur when parties disagree about the distribution of material or symbolic resources and act because their goals are incompatible or when their interests are perceived to be different. Ross (1993) further asserts that periodic conflicts between individual members or different user groups are inevitable in any collectivity. However, there is a widespread variation in how different groups respond to conflict. Social structural patterns determine the ways in which conflict and cooperation are organized.

Gulliver (1979) concurs and explains that when conflicts occur, negotiations are an important part of conflict resolution. Negotiation at a local level can help bridge the gap over differing interests in situations of scarcity when both parties are seeking the same resources without there being enough to satisfy both. Adjudication on the other hand normally occurs when there are disputes concerning values, norms and the assessment of facts. In adjudication, the decision maker is usually a third party[5]. Negotiation among conflicting parties seems to work better at handling conflicts in certain societies because people know each other. In many cases they can find a common ground for solving their problems before seeking an adjudicator. Resort to violence occurs much later in the process of conflict after other options are exhausted or in situations where there not many other options to pursues.

It has been argued that adjudicators tend to be concerned about issues presented to them and rarely if ever are they concerned with disputant's relations now or in the future.

In resolving conflicts, it is important to address issues about which the parties are contending as well as deeper concerns which if ignored can resurface up in a short while. The importance of handling the core of conflict was emphasized by Follett (1940) when she argued that conflict in any situation may be handled in three main ways: domination, compromise and integration. Domination involves one side winning over the other and is many times considered the easiest way to handle conflict. Compromise takes place when both parties give up a little so that the activities taking place may go on. In real life this rarely happens because of a lack of adequate institutions to facilitate it. Follett (1940) asserts that an even better way to handle conflict is integration whereby the two parties get what they want through having their desires integrated. Although difficult to achieve, integration would result in situations that will not elapse into conflict. Unfortunately many societies do not have institutions to facilitate the integration of issues and hence conflict persists in these societies. Integration can result in rule systems that are more considerate of different parties rights, objectives and needs and therefore the likelihood of conflict reoccurring is minimized. If the rights of the people are not respected, it is very difficult to have cooperation in use of collective resources. In the following section we look at rights and rules and how they may relate to conflict situations.

**Rules, Rights and Conflicts**

Rules and conflict are greatly intertwined. Ross (1993) asserts that although the terms 'rights' and 'rules' are frequently used interchangeably in reference to the use of natural resources these terms are not the same. Rights are the product of rules. And while rights refer to particular actions that are authorized the term rules is used to refer to a prescriptions that create authorizations (Schlager and Ostrom 1992). For every right an individual holds, there exist rules that authorize or require an individual to carry out particular actions in exercising that right. Possessing a right implies that someone has commensurate duty to observe this right and, therefore, rules specify both rights and duties. In institutional analysis, it is important to understand the link between rights and

rules because many people break **rules as** an **attempt** to **assert their rights, which in turn** may result in conflict and or disputes.

Agrawal (1994) argues that in forest resources, the especially important rules are (1) boundary rules that limit who can use a forest (2) authority and scope rules that specify how much of what type of forest product can be extracted or the condition of the resource after harvesting and (3) authority and pay off rules that empower monitoring, sanctioning and arbitration. The creation and enforcement of these rules in a collectivity is, however, a challenging task. If the appropriate rules are created, adapted and enforced, then collective-choice problem may be solved and institutional arrangements that could result in sustainable use of the forest (Ostrom et al. 1994). Unfortunately, people engaged in collective choice may design rules that are either too lax, therefore, resulting in unsustainable use of the forest, or too restrictive, forcing users **to** violate prescribed rules due to the extreme need for forest products. Conflicts can occur if rules are too restrictive or take away the rights that individuals previously had. Successful institutions for governing common pool resources realize that there will be disputes or conflicts and, therefore, arrange for dispute resolution for these conflicts to be aired and rules clarified and adjusted if necessary (Ostrom 1990; Mckean 1992; Ostrom, Gardner and Walker 1994).

Effective local institutions must have a variety of reliable conflict resolution mechanisms for sustaining common property resource such as forest resources. In many developing countries, judicial court systems are not well developed or are ineffectively imposed by the government. They are, therefore, many times ineffective in resolving conflicts or disputes. Instead, local people have found other ways of dealing with conflicts using their own institutions (Gulliver 1979). Local arenas for conflict resolution are important because they are not only accessible but many times would know how to deal with the problems on hand before letting them escalate into serious conflict. Unfortunately, central officials at times find these arenas threatening and attempt to sabotage any efforts to introduce or maintain them.

From the discussion above, it is easily discerned that rights, rules, their enforcement and conflict resolution capabilities are important for sustainable management of common pool resources such as forests and that successful institutional solutions to conflicts in the management of forest resources depend on rules that can help solve appropriation and provision problems related to the use of community resources. The following section gives a brief background to the study before using the IAD framework to tease out not only the important rights, rules and norms affecting the use of the forest resources but also factors preventing or fueling conflicts in the use of the forests.

**Background to the study**

Although the forests in Uganda provide valuable products and services, they are under a lot of pressure and are disappearing rapidly (FAO 1993). It is estimated that 650km$^2$ of forestland are lost annually due to various pressures (FAO 1993). Forests in Uganda cover an area of about 4.9 million hectares, which constitutes 24% of the total land area (Ministry of Water, Lands and Environment, 2001). Open forests or woodlands are about 81% of the total forested area while tropical high forests cover the rest. The ownership of forests fall under two institutional arrangements, with 70% of the forested land being privately owned and about 30% government owned. Two thirds of the government reserves are managed by the Forest Department, while the remaining one third is managed by Uganda Wildlife Authority (Ministry of Water, Lands and Environment, 2001). Open forest is the dominant forest type on private land with charcoal production being their main commercial value (Gombya 1995).

Government-owned forests in Uganda are either nature reserves, in which case they are managed for nature conservation and timber exploitation is illegal, or productive reserves, in which case timber may be extracted under the instructions of the Forest Department (Struhsaker 1987). In both cases local communities in areas surrounding these forests do not have formal rights of access to harvest timber products from the forests. They however can harvest non-timber forest products for household and

subsistence use. Permission to harvest timber in specific areas of the forests can obtained from the Forest Department.

Private forests in Uganda may be individually or communally owned or owned by organisations or institutions. The owners usually decide whether local residents can use the forests for non-timber forest products or for timber products for subsistence use (Gombya 1995). This study is based on two forests. Both forests are found in Mpigi District and are relatively close to each other. The two forests are used because they share several common characteristics that make it possible to control for some variables that could be argued to cause differences in results. They are both found in the tall grassland zone and both are tropical moist evergreen forests with closed canopies. Moreover, the same user groups utilize both forests. The main distinguishing feature is that they are under different tenure regimes (Banana and Gombya-Ssembajjwe 2000). Namungo forest is privately owned while the Lwamunda forest is government owned and managed as a forest reserve.

**The IAD Framework**

The IAD framework is used in this study to reveal rights and rules in use of these forests by the communities and to establish the link between conflict and the prevailing institutions. The central idea behind the definition of institutions is the notion of humanly designed constraints and opportunities (North 1990). Institutions constrain behavior thereby increasing the predictability of human interactions and making it possible for some activities to take place that would not have taken place otherwise. One of the most important aspect of institutions are shared rules about what should be done, what can be done, or what is permitted to take place in particular settings (Ostrom and Crawford, 1995).

The starting point in the use of the IAD framework is the identification of a conceptual unit called the action arena that is ultimately the focus of analysis, prediction and

explanation of behavior and outcomes within fixed constraints (Ostrom *et al.* 1994).

Figure 1 below shows the action arena for the case studies.

**Figure 1: Conceptual diagram showing actors and their interactions in the Action Arena**
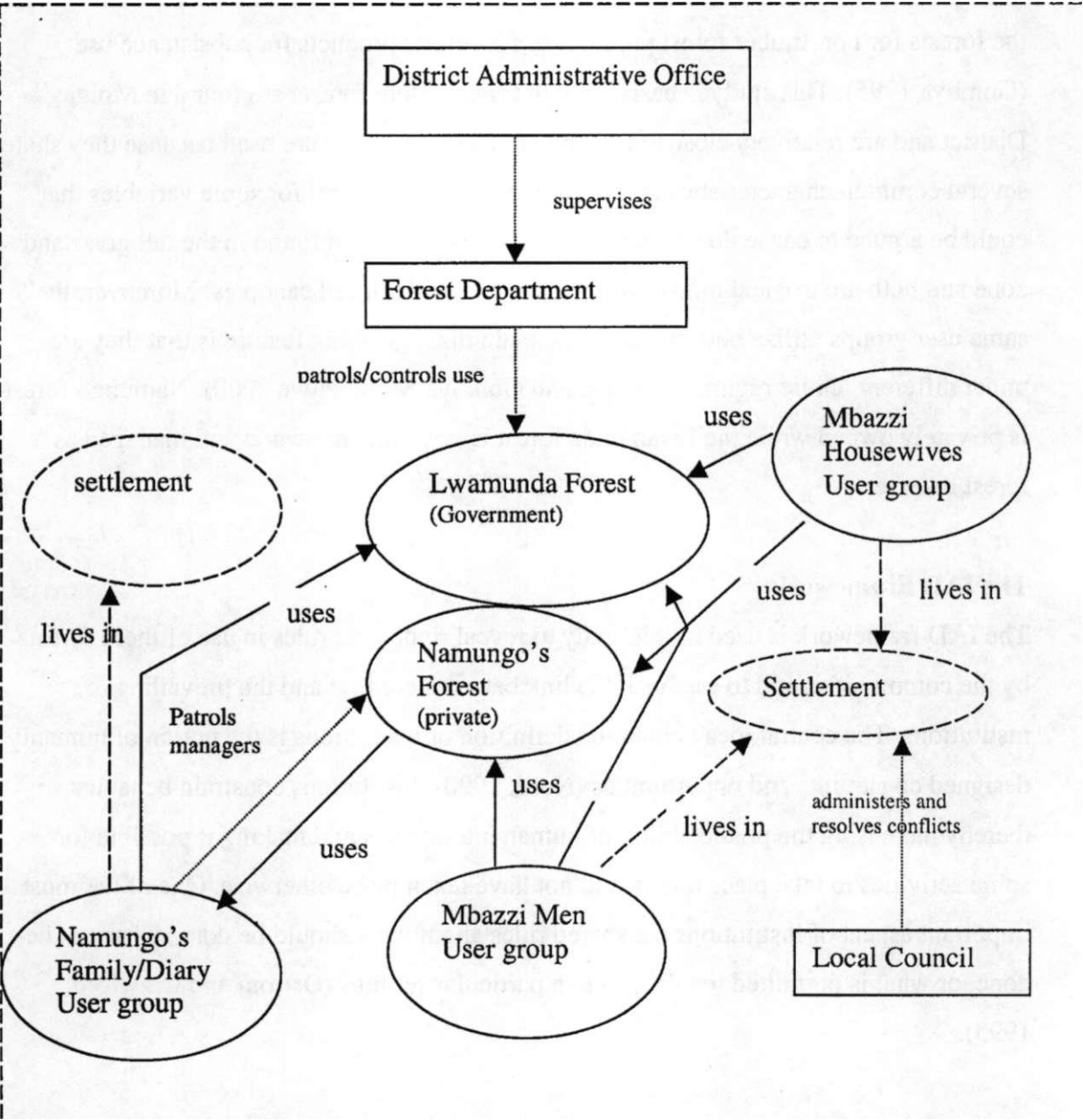


From this figure we note that most of the user groups are just consumers of products from the forest and not directly participate in the management of the forests. This is especially

true of Lwamunda forest. As we shall see in the coming section, the Mbazzi **men's and** Mbazzi housewives' user groups indirectly participate in the monitoring and making of rules for use of Namungo forest. This has serious implications as highlighted later in the paper. Having identified the action Arena, the IAD framework is utilized to establish factors that influence the interaction of various actors in the action arena and the outcomes of these interactions.

Three main sets of factors influence an action arena. They include the rules that individuals use to order repetitive relationships, the physical world in which they live, and the nature of the community in which the arena occurs. These combine to create various incentives and constraints for actors in different action arenas (Ostrom 1990; Ostrom *et al.* 1994 Ostrom *et al* 1998).

**Physical attributes**

According to Ostrom et al (1994) the physical attributes of the environment influence how the individuals will behave and hence the type of outcomes. Physical attributes not only affect the feasible boundary rules but also the authority rules and the monitoring and enforcement arrangements.

Lwamunda forest reserve is a government owned forest that was given to the central government in 1900 through the Buganda Agreement by the Buganda kings and was designated as a local forest reserve in 1948. Namungo forest on the other hand is privately owned and is approximately 40 hectares in size. In this forest, a small portion of the forest has been planted with Eucalyptus for timber and charcoal needs. The forest was left largely undisturbed until the mid-1800s. The current owner's mother settled in the area in 1939 and was allocated 10 acres. The rest of the land was purchased by the present owner in 1979. The forest is mainly used for firewood, fodder, craft materials, water and wildlife.

According to the forester's appraisal of the forests, Namungo forest's vegetation density and species diversity are abundant. Lwamunda forest on the other hand has less vegetation density compared to Namungo and has species diversity that is normal for the ecological zone in which it is found. While the size of Lwamunda forest is said to have decreased in the past few years due to overuse of forest products, Namungo forest is more or less the same size and is said to be in good condition and with fewer signs of disturbance compared to Lwamunda forest (Banana and Gombya-Ssembajjwe 2000).

**Community attributes**

The local people in the surrounding areas depend on both forest for both subsistence and commercial purposes. Most of the user group members live in a settlement on the edge of the forest or within one kilometer of the forests[6]. Namungo allows local people living near the edge of the forest to harvest firewood, medicinal plants, and water, fruits, and craft materials mainly because it has been customarily like this for a long time. Social norms prescribe actions pertaining to the use of this forest. Three main user groups are found to be using this forest. The first user group is known as Mbazzi Housewives and is composed of 37 members all of whom depend significantly on both forests for their subsistence with only 10 percent depending significantly on the forests for family income arising from commercial activities. In this user group only five households have people who work outside the settlement. This indicates the level of reliance on the forests for their subsistence.

The second user group is Mbazzi Men's user group, which has 35 members. Thirty percent of this user group depends significantly on the forests for its own subsistence while 70 percent rely on these forests significantly for family income from commercial activities. In this user group only one household has members who work outside the

**A user group may be defined as a group of people that harvest from, use and /or maintain one or more forest and who share the same rights and duties to products from this forest. This group is distinguished from other random individuals collecting miscellaneous items from the forest by the fact that they know the shared duties and rights that they hold in common for harvesting from the forest (IFRI 2001).**

settlement. This user group seems to rely more on the forests, especially Lwamunda forest compared to Mbazzi Housewives user group.

Last but not least is Namungo's family/Kawombo's Diary farm which is composed of 15 members most of whom are agricultural laborers. Only 5 members out of the 15 rely on the forests for income arising from commercial activities, while all of them rely heavily on the forests for their own subsistence. No member of this user group has a household member who works outside the settlement. The owner of this forest runs his diary farm on the forestland and sells milk from his animals, which he earns his income. This user group extracts timber from Namungo forest but only when money is needed. Firewood and water for home use are also mainly obtained from Namungo forest.

In all the user groups, Mbazzi Men's user group seems to rely most on the forests. From Lwamunda forest, Mbazzi Men's user group harvests trees for firewood, charcoal and timber for commercial use. In harvesting of forest products, the members of this user group rarely follow the formal or government rules for harvesting, processing or selling of the forest products. There has been no attempt by the user group members to reduce the harvesting of these products even though many of them realize that the forest is becoming more and more deforested. This forest meets 90% of their fuel wood needs and five percent of their fodder needs. The user group also relies heavily on the forest for their water needs. From Namungo forest, this user group harvests wildlife for food, fuel wood and water for domestic use, for distilling gin and for animals especially the cattle. This forest meets 10 percent of their fuel wood needs and two percent of their fodder needs. For both forests the user group feels that conservation measures are too lax and that their sustainability is threatened.

Mbazzi Housewives user group utilises Namungo forest for branches and limbs of trees, which are mainly used for fuel wood purposes. In this community, it is the responsibility of women to look for firewood. The user group extracts palms from the forest, which it uses to make crafts for extra income, and also uses the forest for water, medicinal plants,

*Malanta cloa* (Mpuruguru) and as a refuge in times of war. From Lwamunda forest, this user group obtains more or less the same products.

Mbazzi Housewives and Mbazzi Men's user groups feel a sense of ownership of Namungo forest. This is because Namungo allows them to use the forest as long as they need to and also they have an influence on the rules and norms governing the use of the forest. They look out for illegal extraction of forest products from the forest by outsiders and therefore act as monitors for the owner. In addition to this, Namungo uses his members of staff to monitor the forest. Forest guards under the instructions of the Forest Department are responsible for monitoring of Lwamunda forest.

In the action arena we also find the Local Council officers (LCs) who handle most of the conflict issues in the settlement and the District Administrative officers that supervise the activities **of** the forest officers . There are no other dispute resolution forums that are available for local people to go to in case of conflicts. The following section analyses rules, rights and graduated sanctions. The information obtained is then used to categorize the various conflicts and disputes that occur in these two forests.

**Rules, rights and rule breaking in Namungo and Lwamunda** Forests
In both these forests, there are several rules used in the appropriation and provision of goods. The benefit of one's following the rules is being in good standing with the owner and the community. Furthermore the local people feel that if they all followed the rules the forests would be used more sustainably. Illegal harvesters face several sanctions as will be shown in the next section.

The current Local Government system reflects and builds on the five-level structure of so-called Resistance Councils that were established by the National resistance Movement/Army during their guerrilla war against the second Obote government. Originally designed as local support structures for the guerrilla fighters, the Movement Government decided to spread these Councils nation-wide as the basis for its administration and granted them some judicial powers in 1987.

Namungo imposes a norm on himself in that he only harvests timber when the trees are mature and only when there is need for money. Moreover, in the harvesting of firewood the local people are not allowed to damage live trees.

In Lwamunda forest reserve, one of the main problem faced is lack of clear boundary rules and difficult of excluding other users from the forest. As long as one is a citizen of Uganda, he or she has a right to use this forest for religious, recreational, or other non-consumptive uses, however many people can get permits to harvest timber and burn charcoal. It is difficult for local people to know who has permission to use the forest and who does not and they do not have the right to question individual in the forest. The high demand for forest products coupled with an inability to exclude users makes the appropriators have very high discount rate. The higher the discount rate, the closer the situation is to that of one shot dilemma with all participants having a dominant strategy to overuse the forest (Ostrom 1990). Ostrom also argues that if outsiders cannot be refused from using the forest, local appropriators may be disadvantaged by free riders (Ostrom *et al.* 1994). For any appropriator to have interest in coordination patterns of use, monitoring and provision they need to have authority to exclude others from access and appropriation rightsLax supervision and policing and corruption have limited the capacity of the officers in charge of Lwamunda forest to reduce the rate and mode of harvesting products

Namungo forest being privately owned has clear boundary rules. To use the forest, one needs live in a nearby village or be a member of the extended family. Most members of the user groups follow the prescribed rules because Namungo allows them to use the forest. Although problems of illegal felling and charcoal burning occur they are rare and mainly carried out by people from outside the village. Timber or charcoal extracted from this forest by other people is illegal. The illegal harvester is usually warned or reported to the Local Council.

Although the local people know the rules regarding the use of both forests, they do not participate in rule making as far as Lwamunda is concerned. Rules for use of Lwamunda forest are made by the national and local government legislation. For one to legally harvest timber, he or she needs to have a permit from the forest department specifying the amount of forest products to be removed. Local people are, however, allowed to go to the forest for non-timber forest products. The limitation here is that one can only remove an amount that is for subsistence use and not for commercial use. This rule is rather vague and many times local people have taken advantage of this and taken more than is for subsistence use. From Lwamunda forest, the same products may be obtained and again they have to be for household and subsistence use.

Namungo forest is used basing on customary rules and norms that have evolved over a long time and are influenced by the local people. The government does not have any influence on what can be done in Namungo forest other than preventing the cutting of reserved tree species. Although the rules for use of Namungo have remained the same for a long time, rules for use of Lwamunda have changed with changing governments.

Lwamunda forest on the other hand is used basing on two conflicting rule systems. On one hand, use is based on the legal rules laid out by the government and specified by the forest act and policy. On the other hand use is based on customary rules and practices have existed for a long time. The rules specified by the government and the rules in use are totally different. As an example, Mbazzi Men and Housewives user groups feel that they have a right to use the Lwamunda for all products including timber and charcoal. They, therefore, tend to ignore the rules laid out by the government. Figure 2 below shows a conceptual diagram, which summarizes these findings. The black arrows indicate input in rule making while the dotted arrows are feedback to the rule makers obtained from the state of the forests. It is assumed that as they receive feedback about the state of the forest they change the rules for use of the forest.

Figure 2: Simple conceptual diagram showing how conflict rule systems
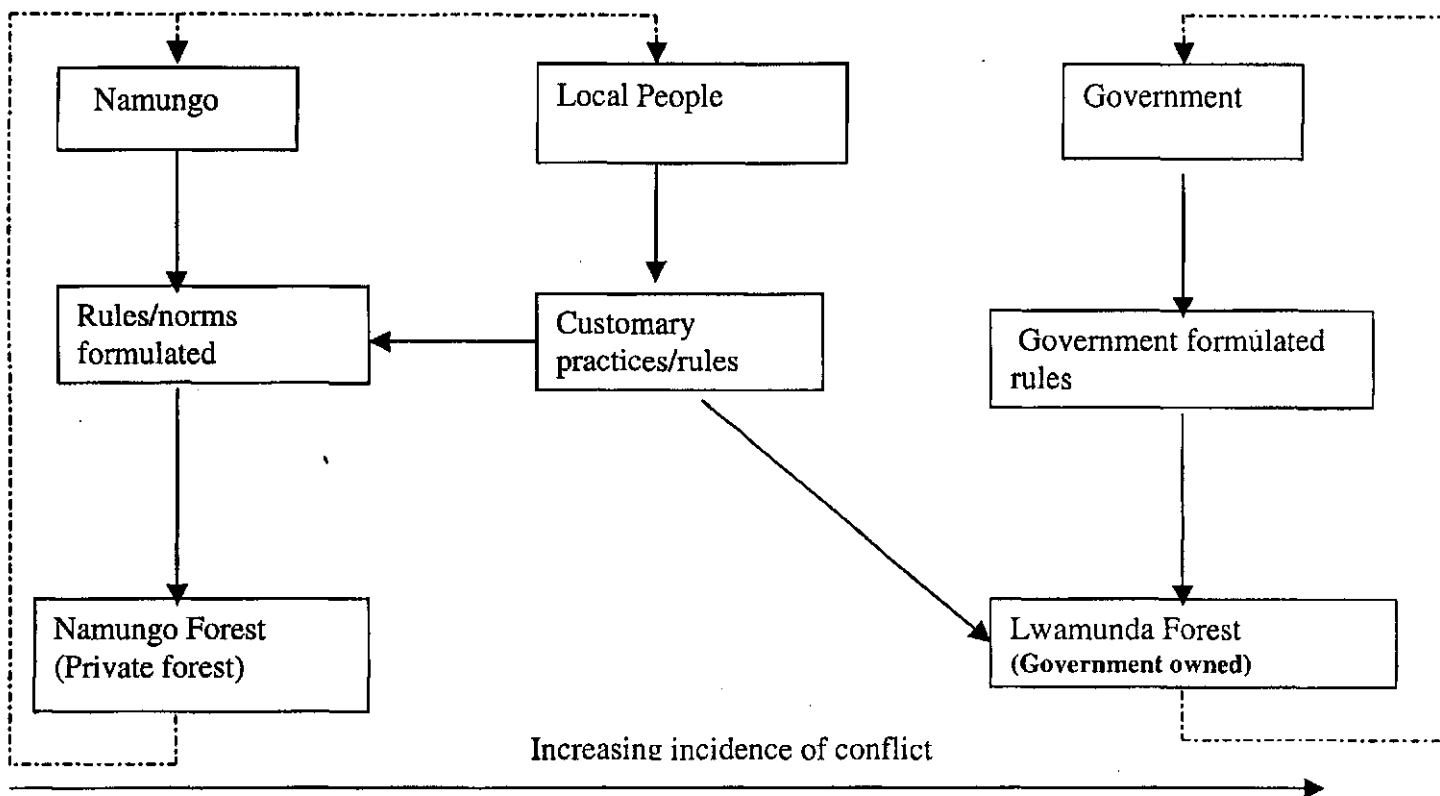


As one moves from left to right, there is more conflict between rule systems. The conflict in rule systems has resulted in rules set by the government being broken and has also exacerbated conflict between the local people and the government officials and ultimately resulted in degradation of the forest. Monitoring and appropriate enforcement of sanctions which would have limited the magnitude of this problem are difficult as we see in the next section.

**Graduated Sanctions and their enforcement**

Users who break rules related to the Lwamunda forest for the first time and are caught are verbally chastised if it is a minor offense. A big offense such as harvesting timber may result in punishment according to the discretion of Forest Department officer. Some times the person may be imprisoned even if it is the first offence if the offense is serious. Second offense entails temporary restriction on harvesting rights from the forest,

discretionary decision by the government office or may be imprisoned. Third time offenders may be punished using all the penalties used for second time offenders and/ or may face permanent suspension of harvesting rights from the forest. In this case the issue is taken to higher authority, that is, Local Council 3 (LC HI) or magistrate's office. In addition to formal sanctions the person is written off as a bad person by local people. It is usually the guard patrolling for a government forestry department, the government official in an administrative setting or a judge in a formal court setting that decides which penalty is appropriate for a given offense. If it is a cash fine, it is collected by an official for the forestry department although the fine is a general source of funds for the national government and not for the forestry department. This is problematic because the Forest officers are attempted to take the money because they know they will not gain anything after submitting it to the national government.

In Namungo forest graduated sanctions are also applied. First time offenders are verbally chastised or reported to the local council. Sometimes they are taken to local council courts. Second and third time offenders may face the same sanctions in addition to a cash fine greater than one week's work. If a cash fine is the punishment, it is collected by local council official and is passed on to Mr. Namungo. Unlike users of Lwamunda forest, users of Namungo forest comply with penalties imposed on them. The person is also taken as a bad person by the owner and local people, which isolates him/her. Furthermore the products and equipments may be confiscated.

Overall, rules are broken when the local people feel they have a right to use a resource and yet the rules do not permit them to do so. Rule breaking in some instances has resulted into conflicts. Not all rule breaking however results in conflicts. In the following section I show situations in which conflict in the study area has occurred because of rule breaking.

**Types of conflicts in the Action Arena**

In both Lwamunda and Namungo, there are several disputes and conflicts. I categorize these into five major types. Dividing conflicts into different types not only shows more clearly how rules and rule violation are linked to conflicts but makes it easier to see which points to address regarding different conflicts.

**1) Disputes within user groups**

This type of dispute occurs when the user groups are given rights to extract resources from the forest under some set of rules but some members of the user groups violate these rules exposing the group as a whole to fewer amounts of products available. Each user group usually has some set of rules governing the amount and type of resources that can be' extracted. In both Lwamunda and Namungo incidences have happened when one individual has taken more than they should from the forest. This is especially common in Lwamunda forest. When this has happened, some members of a user groups have engaged in disputes with those members seen as violating the rules of use as set by the user group (many times these are different from government rules). Typically these disputes are settled within the user group although there are no formal arrangements for dispute resolution within the user groups. Norms do exist where by the person in wrong is gossiped about or taken as a bad person or even forbidden to use the resource by the owner. What needs to be done in this case is to continue supporting the local methods of dispute resolution. It would also be useful to find alternative means of livelihood for the people so that they are not driven to break rules for use of the forests.

**2) Disputes between user groups**

Here one of the parties has to claim that the other has violated some rule (or infringed on their own rights, as defined under some other rule), and it becomes the responsibility of the dispute resolution specialist to make some determination. Associated with this task is usually the determination of a level of appropriate sanction. These kinds of disputes are also common in both Namungo and Lwamunda forest. In Namungo, some local people have entered the forest and burnt charcoal and removed timber without the permission of

the owner. The owner does not burn charcoal or harvest timber unless there is a need for money. Namungo has had to report the illegal harvesters to Local Councils so that they can be sanctioned. Sometimes a member of one-user groups has reported a member of another user group to the Forest officers after seeing him/her illegally extract products from Lwamunda forest. Under normal circumstances, the dispute process should be guided by a set of rules unfortunately many times the process is carried out randomly with no set rules and is often short circuited by bribery. Many times the illegal harvesters bribe their way out of the situation by either giving money or part of their harvests to the forest officers. This dispute can be addressed by formulating a local arena for dispute resolution. This would not only prevent the need to go to the forest department but would also remove corruption especially if the sanctioner and/or adjudicator is elected by the local people and can be changed anytime the local people feel he or she is no longer doing what should be done. In addition to this, the forest officers need to be given the right incentives to ensure that they carry out their role as monitors and sanctioners without being bribed. Again provision of means to meet the needs of the people would reduce incidences of rule breaking and hence conflicts.

**3) Conflict between user groups**
In many cases different user groups have rights to distinct sets of resources, and their needs can be accommodated without overwhelming the resource base. (There may even be healthy competition between the user groups, as long as both follow the rules.). In other cases, there may be an incompatibility between uses, in the sense that when group A extracts resource x, group B may no longer have access to that same resource or to another, linked resource y. Incompatible uses can result in conflictual relationships. Although conflict of this nature is found in use of both forests, it is more common in Lwamunda than in Namungo forest. As an example the products extracted by Mbazzi Housewives user group are different from those extracted by Mbazzi Men's user group or even the illegal timber harvesters. There is an incompatibility of uses because when the illegal harvestors or members of Mbazzi Men's user group extract timber or burn charcoal, the tree are no longer available to provide firewood needed by Mbazzi

Housewives user group. This is especially true with charcoal burning where all the parts of the tree are used up. Conflicts have been reported between user groups especially the resources become scarcer and scarcer. The conflict is exacerbated when the culprits are reported to the forest officers and to the police but because of corruption they are not punished. The local people are greatly concerned about the illegal harvesting of trees for timber, charcoal and fuel wood both for subsistence use and commercial purposes. Firewood is the most important resource for domestic and rural industries, accounting for 95 per cent of total energy consumption in Uganda. Countrywide, charcoal accounts for approximately 4 per cent, while hydroelectricity constitutes approximately 1 per cent of total energy consumption (Sayers *et al.* 1992; MNR 1993; NEMA 2000). The best solution to this kind of conflict would be intergration where all the users have their needs meet without exacerbating conflict. As Follett (1940) indicates achieving integration is not easy and would need commitment from all parties concerned. Regulating use would be a good starting point. This can however not be done unless the local people are involved in making of the rules and in monitoring of the forest. A strong commitment from the government is a prerequisite for the success of this endeavor.

**4) Conflicts between user groups and monitors**

This type of conflict is very common in Lwamunda. Because two different rule systems are used in Lwamunda conflicts between the monitors and the local users is inevitable. The monitors are defined as having certain duties and responsibilities, specifically to observe the behavior of individuals or collective user groups in comparison to the rules that monitor is required to monitor. In a sense this is a well-defined game, in which user groups try to outwit the monitors and the monitors seek to detect violations. This interaction may not be properly described as a "conflict" or a "dispute" since each side is just engaged in their assigned tasks, however it becomes a conflict if the parties involved insult each other. It is a dispute when the monitor delivers this information to whatever entity is responsible for evaluating whether a violation has indeed occurred, and especially what sanction is appropriate.

For a long time the local people living near Lwamunda forest have used it for several timber and non-timber products. There is a tension between the local users and the forest guards when they attempt to stop them from getting supplies they believe they are entitled to. Mbazzi Men's user group illegally harvests timber from the forest even when it knows that this is illegal. Bribing ones way until they get to the point where they can sell their products is not uncommon. Conflicts have arisen between the forest guards that refuse to be bribed and the illegal harvesters. When the bribing takes place the people that do not harvest certain types of products from the forest have complained about the unsustainable use of the forest. Conflict in such a situation is inevitable. One way to handle this situation would be to put in place institutions that would result in the parties involved having the right incentives to do what they are supposed to do. If the forest guards were well paid there would be less incentive to be bribed. Those monitors that carry out their roles without being bribed should be rewarded. Allowing local people to play a role in the management of the forest would also help ensure better monitoring and less illegal harvesting of products. The forest would be managed under one rule system or at least two integrated rule systems.

**5) Conflicts between those assigned the responsibility to impose sanctions and the user groups.**

This type of conflict occurs in the use of both forests. In Uganda, the high levels of dependence on forests in combination with the former paramilitary approach to management of forest resources have bred a relationship between management and the people that is grounded in hostility and conflict (Scott 1998; Hinchley 2000). Conflicts of this kind are therefore more frequent in Lwamunda than in Namungo. Conflicts are exacerbated when a person is reported for breaking a given rule regarding the use of the forest but because of corruption the person is not punished. For example, Namungo has had some conflict with officers at the police station. Sometimes he has reported offenders who have cut firewood or commercial fuel wood from his forest without his permission but the police have let the person go without punishment after being bribed. Moreover, some forest officers in charge, with policemen have mounted roadblocks to arrest illegal

harvesters but have let them go with products after being bribed. User **group members** that cannot afford bribes are punished which they feel is unfair. Unfortunately there is no higher adjudicator that the local people can go to so as to make a claim that the sanctioner is violating its own responsibilities as defined by the rules governing their existence and responsibility. This conflict would be addressed by having the right incentives for the management or sanctioners and for the local people. The local people need to be given rights to use the forests to meet their needs while the people in charge need to be paid appropriately so that they are not driven to bribery. Their should also be monitors of the management.

**Issues and policy implications**

The discussion above and the categorization of conflicts confirms the expectation that resources managed under conflicting objectives and rules systems would have more conflicts and their sustainability would be threatened. There are conflicting rule systems in Lwamunda and more conflicts among users compared to Namungo forest. It is therefore not surprising that Lwamunda forest is more degraded than Namungo forest. Many conflicts have arisen in an attempt to reduce the extraction of resources from Lwamunda forest. The lack of participation of the user groups in the formulation of rules and failure to consider their rights and goals has caused many conflicts among users. Unless this problem is addressed conflicts of this type are likely to occur often. The best way to handle problem would seem to be integration as suggested by (Follett 1940) in which case the government and the local people have their objectives integrated which result in reduced conflicts and also an incentive for the local people to use Lwamunda in a sustainable manner. It is hoped that this integration could result in situations that will not elapse into conflict.

As far as Lwamunda forest is concerned, the local people do not have incentives to consume forest resources in a sustainable manner. People do not feel a sense of ownership of the forest and therefore they do not try to minimize what they harvest from the forest nor do they carry out regeneration activities and/or reforestation.  Illegal felling

of timber may not be reported unless it is likely to affect extraction of products of interest from the forest. Studies have shown that for a sustainable use of common pool resources such as forest, it is important that the local people participate in rule making because it is these individuals that directly interact with one another and with the forest resource and would therefore be better equipped to formulate rules that fit well with the specific characteristics of their setting (Ostrom 1990). The situation is different in Namungo forest. Because people can exercise their customary rights to harvest products from the forest, they have a sense of ownership, which makes them monitor themselves in harvesting of the resources and to protect the forest from outsiders who want to illegally harvest from the forest. This has also resulted in few reported incidences of conflicts between the owner and the local people.

The strong reliance of the government on to the forest guards for monitoring is problematic. The forest department does not have adequate resources to fulfill its protective function. Moreover, Banana and Gombya-Ssembajjwe (2000) report that the Forest Department staff has few incentives to patrol frequently because the benefits resulting from their employment is not tied to the enforcement of the law. Therefore, the degradation seen in this forest is not a surprise. Ostrom (1990) asserts that compliance to the rules can be increased if the local users know the consequences of not complying with the rules, and that sanctions can be enforced.

Furthermore, there is need for users to know that monitoring is effective. This will only be achieved if the problem of corruption among forest officers is addressed. Banana and Gombya (2000) have argued that sustainable utilization of forests is more likely to be attained if an effective structure of institutional arrangement exists that ensures a meaningful authority system at the local level. Although the communities studied in this study, can go the Local Councils or even the forest officers in case of conflicts arising from illegal harvesting of forest resources, there is no mechanism for addressing the deeper issues that are causing the conflict within the communities. Elders in the community no longer seem to have a meaningful role in conflict resolution. Previously

the elders living within the communities played an important role **of** resolving **disputes.** Now disputes have to be reported to the government representative. There is a need for an arena that is reliable and open for reporting the illegal activities and conflict. One way **to** increase the chances for successful conflict resolution in the use of these forests would be to develop a systematic frame of rules, with conflict resolution mechanisms making up a part of that system, rather than being ad hoc creations.

**Conclusion**

This paper attempted to show the linkage between rights, rules and conflicts in two forests in Uganda. Using IAD framework an analysis of rights and rules regarding the use of Lwamunda and Namungo forests was carried. The common conflicts and disputes in the use of the forests include; disputes within user groups, disputes between user groups, conflicts between user groups, conflicts between user groups and monitors and conflicts between those assigned the responsibility to impose sanctions and the user groups. It is found that there are many more conflicts regarding the use of Lwamunda forest, which is government, owned compared to Namungo forest, which is privately owned.

This study indicates that conflicting objectives and rules and the failure of the government to integrate local people's needs into the management of forest resources does result in conflict not only between the government officials and the local people but also among the user groups. The local people feel that their rights have been taken away and therefore see no reason to obey the rules or cooperate with the forest department. They use their own rules and norms in the harvesting of forests from Lwamunda forest.

Namungo forest where users have customary right to harvest is in a better state because the users influence the rules and therefore the forest is managed under one rule systems. There is more cooperation with the owner in the use of this forest. Moreover the local people feel a sense of ownership and therefore help in the monitoring of the resource. Furthermore, we also note that the users are more inclined to obeying the rules regarding this forest compared to Lwamunda forest.

Corruption has exacerbated the conflicts not only between the forest officers but also among user groups. Moreover, it has in many instances short-circuited the dispute resolution process. The lack of a cheap and local arena for airing conflicts that arise in the society is problematic. The local people have to seek an adjudicator and yet as shown in the paper this person is usually a third party who is usually bribed by the offenders that can afford pay. This problem is even more magnified regarding Lwamunda forest where local people report illegal users to the Forest Department officers and yet the officers do not have the incentives to punish the culprits especially if the culprit can afford to bribe his way out of the punishment. This is in contrast to Namungo forest, where if conflicts arise from the illegal use of Namungo forest the user groups attempt to resolve them amongst themselves before they take the issues to the Local Council.

Overall, user groups need to be given rights that are congruent with their needs and expectations (and consistent with physical conditions), and they need to somehow craft individual incentives so as to not lead to inadvertent violations of their rights. Monitors, judges, and sanctioners all need to have the right incentives to carry out their assigned tasks. Corruption (or other perverse incentives) can enter the process at any step. For some small, self-organized groups, all of these tasks may be fulfilled by all members of the group. But in most cases, monitoring, judging, and sanctioning tasks are delegated to specialized agents. Furthermore, those actually making the rules have to have the right incentives, by being rewarded for solving actual problems effectively rather than being rewarded for their success in distributing rewards to other actors or to implementing some overall ideology. For a sustainable system of governance, all of these agents have to be properly motivated. Without the proper motivation, it is unlikely that conflicts and tension between the government and the local people will be eliminated and that forests will be managed in a sustainable manner.

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