

**Coping with a changing forest policy: Livelihoods in Mpigi District,
Uganda**

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Introduction and Background to the study

In the past decade or so, international attention has focused on the plight of forests, resource degradation, declining biodiversity and the impact of decreasing forest resources on the lives of many people (FAO 2001; FAO 2005). Although this problem is global in nature, it is more serious in the world's tropical forests. More forests were lost between 1981 and 1990 than is known to have been lost in any other decade in human history (FAO 1993). During this period, tropical forests alone were lost at a rate of 0.8 per cent (15.4 million ha) per year (World Resources Institute (WRI) 1994). One effort to address the deforestation problem has been the promotion of institutional changes within the forestry bureaucracies in order to make them more responsive to the needs of the local people and to the demands resulting from such phenomena as globalization and climate change (Larson 2002; World Bank 2000).

Traditionally, the major strategy adopted by the third world countries was to withdraw these forests from the public domain into what were expected to be protective hands of the state and managed as government-owned forest reserves. As population pressure, the need for land and demand for wood and charcoal have increased in the last quarter century, this strategy has been tested and found wanting (Wily 1995). A recent approach has been the decentralization of forest management control to the local level through a variety of institutional arrangements. While these institutional changes have in some cases resulted in sustainable social ecological systems, in other cases where they have resulted in their collapse (Gunderson and Holling 2002).

Unfortunately, little attention has been paid to the ways in which these newly established systems actually function at the local level. It is also not clear what the effects of these changes are, not only on the livelihood of the local people but also on the natural resources. Are these institutions always appropriate? Do decentralized policies meet the expectation of sustainable management of forest resources in developing countries? How do they affect the local people as far as access to these resources is concerned? Do they improve the lives of the rural poor? If not, what coping mechanisms do the local people use in such circumstances? These questions are important for policy makers and analysts alike because without an understanding of the effects of current and past institutional changes, they will be unable to adjust current policies in a way that improves future outcomes.

The purpose of this paper is to examine how decentralization affected local forest resource users, who previous to the reform had very limited formal access rights to forests. Furthermore, it assesses how local forest users are coping in the face of recent policy reforms. An analysis of coping mechanisms that the local people employ after institutional changes is important because it enables us to understand the various coping strategies that people adopt in situations of such changes and the implications of the different coping strategies on natural resource use.

Decentralization and Natural Resource Management

Although decentralization is not a new concept, it has tremendously gained popularity within the last two decades. The term was first used in the 1950s and 1960s when British and French colonial administrations prepared colonies for independence by devolving responsibilities for certain programs to local authorities. In the 1980s however decentralization was put at the forefront of the development agenda as an alternative to the acknowledged failures of the centralized system of governance. Today this policy is widely pursued by both developed and developing countries (Work 2002).

Decentralization is broadly defined in general terms as a transfer of various properties and functions of government, management or administration from the national (central) level to “sub-national levels” These properties may include power, authority, functions, resources and responsibilities. The “sub-national level” usually refers to lower levels of government, but can include entities such as parastatals, administrative field offices, NGOs and structures representing the community/public. Ideally, the term should be closely linked to the concept of subsidiarity, which proposes that functions be devolved to the lowest level of social order that is capable of completing them. This however rarely happens on ground. There are three broad types of decentralization: political, administrative and fiscal and four major forms of decentralization: devolution, delegation, deconcentration and divestment (Work 2002).

Decentralization policies for natural resource management became widespread in the last 30 years. In many cases they have involved forest departments and natural resource agencies transferring rights and responsibilities to local people so that they can protect forest cover, timber stands, game, and other forest products (Ribot 1999; Meinzen-Dick and Knox 2001).

Decentralization was fuelled by hopes of facilitating self governance (Ostrom 1990); having greater citizen participation in public affairs (Ribot 2002), a better match of public services to local needs (Crook and Manor 1998), more efficient delivery of public services (Oakerson 1998; Wunsch and Olowu 1995), more flexible government policies (Oakerson 1998; Ostrom 2001), and a more accountable government (Andersson 2003; Agrawal and Ostrom 2001; Ribot 1999; Crook and Manor 1998). Decentralization was also expected to enhance the contribution of forests to local livelihoods, either as a goal in itself or as a necessary incentive for local people to protect forests (Meinzen-Dick and Knox 2001).

Although the theoretical advantages of decentralization for improved information about local conditions and other aspects of forest governance have been convincing, the outcomes of decentralization programs have been mixed. While in some places decentralization has resulted in positive and expected outcomes, this has not been the case in other places. For example, in their study, Crook and Manor (1994) highlight examples of successful efforts to decentralize. They argue that in Karnataka, India, the decentralization policies were very successful at producing better levels of service provision and a more responsive government while in Botswana decentralization improved local accountability. Despite these examples, these scholars explain that governance reforms that are truly empowering for the poor, responsive to their needs, and effective in reducing poverty are rare. Sometimes local people are left worse off after decentralization. Smith (1982) gives an example of a case where decentralization did not result in the desired outcome. He reported that in Nigeria although decentralization was intended to make local administration more responsive to the local community, decentralization was implemented without an appropriate revenue base. Local government depended heavily on central grants which could be withheld any time by the government for various reasons. Smith reported that the controls were drawn into a punitive style of central supervision. The result was 99.6 percent of grants for education and health being in arrears, causing severe cash flow problems between 1969 and 1970.

Once resources are decentralized, new tenurial arrangements are introduced. Hopley (1995) explains that in some cases villagers already had *de facto* use rights to forest lands; the formalization of these rights has actually resulted in a diminution in the benefits available. Many

places have also experienced privileges from the reforms for only a short time before they have been taken away. She explains that in several countries villagers have raised questions about the security of their claims in the face of political instability and shifting government policies at the national level.

The failure of decentralized programs in most cases has been attributed to the implementation of these programs without taking into consideration the traditional structures and existing institutions and local people's needs, which are important for the successful implementation and sustainability of the programs (Diego *et al.* 2003; Shackleton and Campbell, 2001). Carney and Farrington (1998) assert that once policy changes are implemented in this way, it is not uncommon for their implementation to be opposed and have unexpected outcomes. They explain that when there is opposition to the new institutions there is a possibility that the new institutions will fail, which may have significant implications for the poor and the sustainable management of these resources. Local people may feel threatened by the new institutions and hence resist them. Unfortunately, resistance can mean that change is never really operationalised. In this case, superficial changes are made while complex underlying relationships remain unaltered (Carney and Farrington 1998). Sometimes it is the very people that are supposed to implement the new rules that may resist the changes. For example, in India the District forest officers in Haryana rejected changes which had been made not by voicing their opposition to change but by refusing to enforce the directives they had been given. The same was true in the Costa Rican forest sector (Carney and Farrington 1998). Resistance to reforms could also be due to opposition by individuals outside the government who previously benefited from pre-reform structures and configuration of interests, whether they were legitimate or not. Hobley (1995) argues that there are cases where the forest department officials receive direct payments from influential villagers for privileged access to forest resources. Reforms that could change this tend to be strongly resisted by these individuals. Where these individuals also dominate elected and appointed local level decision making forums, reform efforts are likely to be unsuccessful.

Besley (1997) argues that decentralization enhances the prospects for better livelihoods for the local people only when it leads to fundamentally (i) new institutions, (ii) changed political

structures, (iii) improved governance, or (iv) changed attitudes towards the poor. Unfortunately, this rarely happens.

From the literature we note that one of the main problems with institutional changes such as decentralization is having unexpected outcomes. Although many studies have been carried out on the effects of decentralization policies, very little work has been done on how people cope with the outcomes of these policies. This study is aimed at shedding some light on this issue.

Coping with unintended outcomes of institutional changes

North (1990) explains that in certain contexts although formal rules change, informal rules do not change. This results in an ongoing tension between the new formal rules and the informal constraints. This tension can sometimes result into formal institutions having unintended consequences which local people have to deal with.

Empirical research has shown that resource users in different settings tend to adopt different strategies to cope with changing environment including changes in institutional setups and user groups (Ostrom 1990; Holling *et al.* 2002). The different strategies adopted tend to bring about different patterns of institutional development as well different institutional designs. Holling *et al.* (2002) explain that once changes in institutional arrangements occur, individuals or groups of people act to seize opportunities and resources available to them in both the social and physical environments. Individuals therefore may devise institutions when they face a collective choice dilemma. For example, when individuals realize that there are some goods and services that they cannot produce individually, they may be motivated to organize and devise institutions governing such a production. Different use patterns can evolve as a response to uncertainty and increased competition over the use and access to resources. Ostrom *et al.* (1988) give many cases that indicate that there are situations in which co-operation between a group of resource users does lead to careful and sustained management. On the other hand, there are many cases where resources have been grabbed due to the insecurity caused by the institutional change resulting in more degradation of resources (Carney and Farrington 1998).

Although all the local people may be affected by institutional changes such as decentralization, the ability of people or even societies to adapt to and cope with the effects of these changes is varied. Arnold (2001) explains that how well local people cope is a combination of all the natural and social characteristics and resources available in a particular location. Factors such as wealth, technology, education, information, skills, infrastructure, access to resources and management capabilities all influence the ability to cope. Many local people can be vulnerable to extreme negative effects of the institutional change depending on their ability to make use of particular coping mechanisms and methods. For example, the poor in a given society are less able than their wealthier neighbors to accumulate assets that would enable them to survive the times when access to resources is reduced since they do not have any savings to draw from. Women and children particularly have less capacity to adapt to the changes that result in less access to natural resources (Arnold 2001). It is also not uncommon to find that coping mechanisms that were effective in the past cannot keep pace with current institutional and environmental changes. This especially happens when the traditional options that were previously effective are reduced or eliminated or when the new threats that have emerged do not have existing appropriate coping mechanisms, resources are lacking and technology and skill are not available.

This study is therefore important because it sheds light not only on how people cope with, adapt to, challenge, and ultimately change institutions that are supposed to be constraining but also on the implications of the various coping strategies adopted.

Why Uganda?

Uganda is an ideal case study for many reasons. Uganda has one of the longest established and most ambitious democratic decentralization programs in Sub-Saharan Africa (Francis and James, 2003). Uganda's decentralization program was first announced in 1992, and codified in the 1993 Local Governments (Resistance Councils) Statute, the 1995 Constitution, and the 1997 Local Governments Act. Decentralization of the forestry sector has been an important part of the overall program, although during the period 1993-2000 there were successive decentralizations and recentralizations of forested lands. The study area represents one of the pilot areas for the decentralization program.

Forests in Uganda play a major role in the lives of many people, and yet many of these forests are disappearing rapidly. At the turn of the century, the forests and woodlands covered nine million ha (about 45 percent) of the country's land surface, but over the last 100 years, the forest cover has been reduced by 30 percent and today covers less than six million ha. These resources are important not only for economic but also for social and ecological reasons. For example, it is estimated that 90 percent of the fuel needs for the whole country are provided by firewood or charcoal from the forests. The forests are therefore under tremendous pressure with high rates of deforestation. Addressing the deforestation problem is one of top priorities for the Ugandan government (National Environment Management Authority (NEMA) (2001). Understanding how institutions and their changes affect forest use would be a step in this direction.

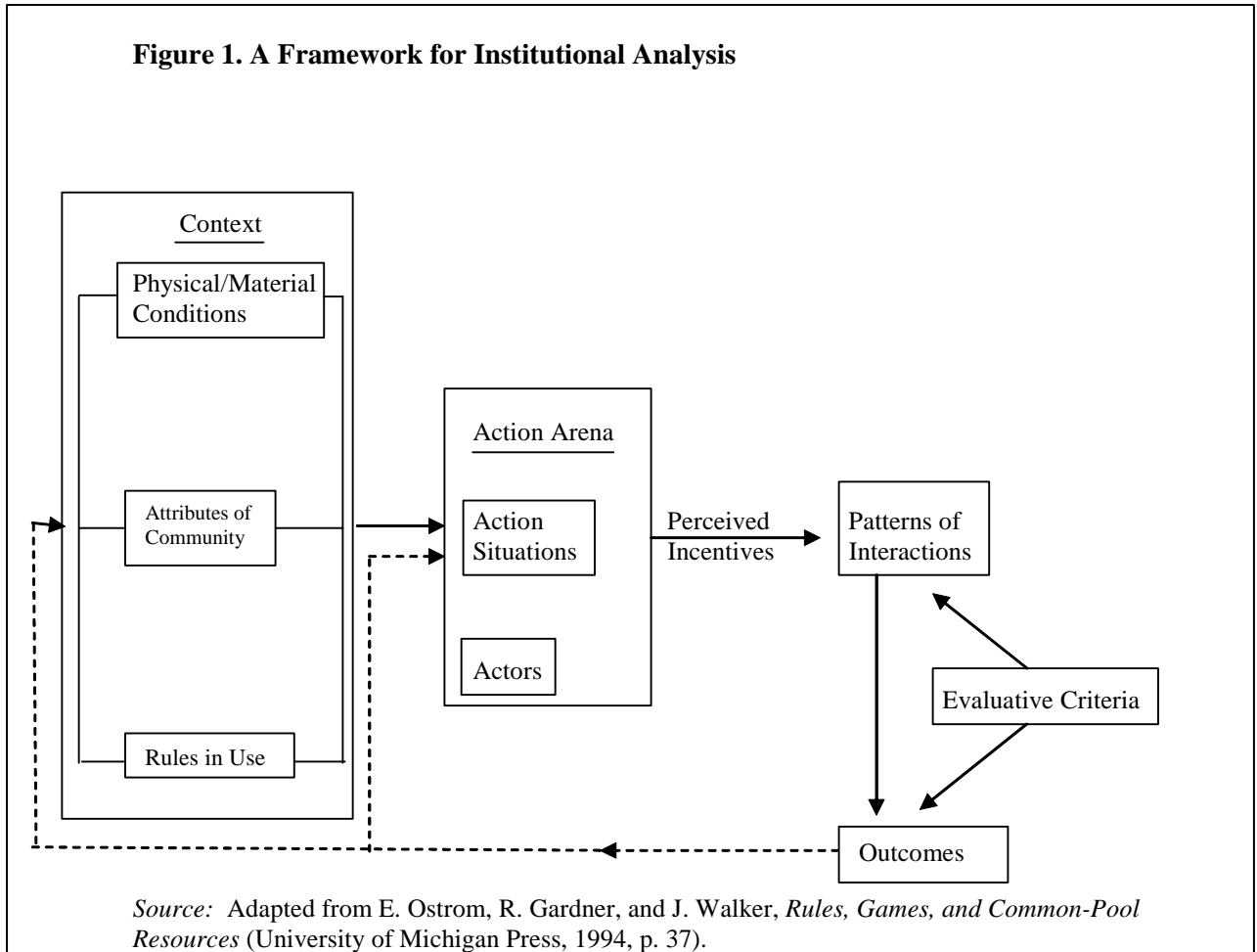
Uganda is highly populated with a large number of people that are poor and highly dependant on forest resources for their livelihood. With a 2.5 percent growth rate between 1980 and 1991, Uganda's population grew from 12.6 million to 16.7 million (NEMA 1997). Currently the Uganda Bureau of Statistics (UBOS) estimates the population to be 26.3 million, with a growth rate of 3.4 percent and it is expected to double by the year 2025 (UBOS 2004). About 88 percent of the population is still rural, deriving its livelihood from natural resources. Uganda is therefore an appropriate case study on the impact of institutional changes such as decentralization on rural livelihoods.

It is my hope that the study will provide policy makers with information that could lead to the implementation of appropriate institutions for sustainable forest use. The local people would benefit by having better institutional arrangements for the management of the resources on which they rely for their livelihood.

Theoretical Foundations of the Institutional Analysis and Development Framework

In this study I utilize the Institutional Analysis and Development (IAD) framework to identify the main variables that seem to affect forest use and management (See figure 1). The framework provides not only a structure for the study but also a more specific structure for analyzing the micro level reaction to policy changes at the national level. This framework has been extensively used in institutional analysis by scholars in at least twenty five countries in regard to common

pool resources such as ground water, fisheries, forestry, irrigation, property rights, local services, macro political order among others.



The framework is particularly important in identifying the elements and relationships among these factors that one needs to consider for institutional analysis. It helps organize diagnostic and prescriptive inquiry and provides the most general list of variables that should be used to analyze all types of institutional arrangements (Ostrom and Wertime 2001). Using this framework, community actors are disaggregated, their preferences and incentives outlined and the influence of their resources of power and wealth on processes and outcomes evaluated. Actors' decisions and action are then studied within the prevailing biophysical, cultural, and institutional conditions.

In the following sections to provide the analysis on the exogenous variables, I use the IAD framework to briefly highlight the attributes of the resources and attributes of the resource users in Mpigi district before I concentrate on changing rules and governance in much greater detail. This information is important because it enables me to understand what kind of resources are available, the rules governing their use, who the users are, what they are like, their positions relative to each other, their incentives, the information available to them, and the costs and benefits of the possible outcomes of the decision-making interaction.

Attributes of forest resources in Mpigi District

All forest sites and communities visited in this study are found in the same agro-ecological zone known as the tall grassland zone which helps in controlling variations that could have come up as a result of differences in ecological characteristics. The vegetation in this agro-ecological zone is characterized as a tropical moist evergreen forest/savanna mosaic (NEMA 2001). There are two main types of forests in the study area which include the medium altitude moist ever green forests and the medium altitude moist semi deciduous forests. In total there are 59 forest reserves covering an area of approximately 37,321 hectares. The forest reserves are further divided into two main categories namely central forest reserves and local forest reserves. In addition, there are private forests that cover an area of approximately 20,155 hectares. The forests are mainly used for the provision of energy in form of fuel wood and timber but are currently faced with several problems including deforestation and encroachment through conversion to agriculture, fuel wood cutting, charcoal burning, pit sawing and brick burning (NEMA 2001).

Attributes of the resource users in Mpigi District

The forestry sector is characterized by a great diversity of users. There are approximately 56 different indigenous groups in Uganda. Most of these groups maintain their particular culture, traditions and languages that originate from pre-colonial times and strongly rely on these forests not only for cultural purposes but also for social and economic purposes. Within the study area, there are 34 different ethnic groups. The dominant ethnic group is the Baganda who comprise 86 percent of the population. These are followed by Barundi who comprise 2 percent of the total population of the district. The least dominant tribe is the Batwa, Pygmies with only 4 people.

The population of Mpigi district is estimated to be 414,757 of whom 49 percent are female. The population density is 152 persons /km². Most people in this district live in rural areas with only 15 percent living in urban areas. With a per capita income of less than US \$ 300, most of the individuals are very poor. The population living below the poverty line is estimated to be 80 percent (World Bank 2000). According the Population and Housing census of 1991, approximately 52 percent of the population depends on farming for their livelihood (UBOS 1991). In 1997 another study was carried out by NEMA that showed that 46 percent the local people are engaged in subsistence farming with no other major type of economic activity to support their livelihood. The trend has therefore not changed much over the years which means that even with the country's economic development, these people are unable to meet their basic needs. The main economic activity is agriculture, followed by fishing, forestry/lumbering and trade.

Table 1: Main Sources of Income, Mpigi District

Main Source of income	% Population in Study Area
Subsistence Agriculture	52
Employment Income	24
Family Support	10
Commercial Farming	2
Trade	7
Property/Cottage industry	2
Others	3

Source: Population and Housing census of 1991

Despite the high dependency on agriculture, production in most places is very low due to small land holdings and inappropriate farming methods. Agriculture is mainly characterized by low investment, low output and high prices of inputs which greatly hinders commercial agriculture (NEMA 2001). Furthermore there is a very high dependency on the forests in the districts for fuel wood with over 80 percent of the population relying on the forests as sources of energy.

Table 2: Energy use in Mpigi District

Type of Energy	Percentage of Total Households (%)
Electricity	0.65
Gas	0.02
Paraffin	0.30
Charcoal	8.84
Firewood	89.4
Dung/Grass	0.07
Not Stated	0.72
Total	100.00

Source: UBOS 1991. Population Census and Housing Report 1991.

From the table above it can be noted that less than 1 percent of the local people have electricity. Although charcoal is in high demand in Kampala, only a few individuals use it in the local communities. This is because it is more profitable to sell it for income than to use it themselves.

Historical Overview of Forest Governance in Uganda

A study of decentralization in Uganda would not be meaningful without a brief description of the history of forest governance in Uganda. Traditionally, forests in Uganda were managed under a variety of property rights. The property rights were diverse across different regions. For example, in the central region there was a strong sense of communal property rights. Communities used the forests under the authority and advice of community elders, clan heads and/or kings. Bundles of rights (including access and grazing rights) in the same forests could be held by different persons or groups of people in particular areas of land. These different rights in land could be transferred from one generation to the next. Decisions regarding use of the forests were made by clan heads but often resulted from discussions in the family and clan, guided by customs that took into account the needs of various persons in the user group (Kamugisha and Sepp 1996; Gombya-Ssembajjwe and Banana 1998).

In 1900 however, the colonial powers centralized forest resource management. Forest regulations were set which prohibited cutting or harvesting of forest resources except with a

license or for domestic use by the natives (Kamugisha and Sepp 1996). The first forest reserves were gazetted in 1932. The main objective of gazetting the forest reserves was to create a forest estate that would cater for the country's needs for forest products and services. This period was characterized by forest management where authority was concentrated in the Forest Department through a process of command and control. The conservation policy of these ministries entailed exclusion of all other groups with interests in those resources from participating in the decision-making process or accessing the resources. Due to the centralization of the management of forest resources, institutions that local people had devised to limit the entry and harvesting forest resources lost their legal standing (Banana *et al.* 2006).

It became obvious in the 1970s and 1980s, that the over-centralized forest sector was unsuccessful in promoting sustainable forest management and use (Hamilton, 1984; Bazaara 2002). Deforestation through agricultural encroachment and timber harvesting was increasing rapidly. The lack of participation by local communities in decision-making was often cited as the explanation for inadequate monitoring and enforcement of harvesting regulations and the decline in stocking of commercial wood products. In 1993, the first local government Act was passed by parliament and the government transferred authority over protected resources to local governments. The overall goal for decentralization under the Local Government Act of the forest sector in Uganda was to shift responsibility for forest management to elected local government councils and to encourage more active participation of local communities in the management of the country's forests (Banana *et al.* 2006). The decentralization efforts were however not very successful and resulted in even more deforestation than was previously taking place. One of the main reasons given for the increase in deforestation was that the Local Governments did not have the capacity to manage forests on their own since no preparations were made for this transition. The forest reserves were recentralized in 1995. In all other sectors except forestry, the decentralization program continued as planned. The delivery of all services across all sectors, except forestry, was fully decentralized in all districts following the Local Government Act of 1997.

When the central government re-centralized these resources, the forests were used by the local people as open access which greatly increased deforestation. This was because centralization was

not backed by adequate monitoring and enforcement of rules. Many forests were used as open access. The local people could not support the government in monitoring the forest resources because they felt that their rights had been taken away (Scott 1998). In their study, Place and Otsuka (2000) found that in Uganda, there was a general decrease in tree cover on government owned and common woodlands and bushes between 1960 and 1995 which can be linked to the turbulent institutions in this era.

In 2001, the secretariat formulated a new Forest Policy. The policy calls for the decentralization of budgets and most services to local governments and an incentives framework for local development planning to reflect local priorities, accountability through improved financial systems and transparency of allocation decisions (Adriko 2003). This policy however only resulted in partial decentralization of forest resources with most forests larger than 100 hectares remaining as central forest reserves and managed by the state, while forests smaller than these were managed as local forest reserves. This was followed in 2003 by a major restructuring program in the forest sector which involved the transformation of the Forest Department into a semi-autonomous agency called the National Forest Authority (NFA). This decision was backed up by the Forestry Policy 2001, the National Forest Plan 2002 and the National Forestry and Tree Planting Act (2003) which provided the legal framework for its establishment.

The implications of the 2003 reform

The forest sector reform resulted in three agencies sharing responsibility for overseeing the management of Uganda's forests. One such agency was the National Forest Authority which was assigned the responsibility of managing central forest reserves (CFRs). These comprise approximately 15 percent of Uganda's forests and woodlands. While a big proportion of the central forest reserves is set aside for conservation purposes, some portions of these reserves are managed for revenue generation. For example, stock mapping of hardwoods in tropical high forests for auction to timber dealers, and the parceling up of portions of CFRs for lease as privately managed plantations is taking place. In addition to being fiscally self sufficient by 2007, NFA is expected to increase the total forest cover in the reserves areas through the planting of fast growing exotics such as eucalyptus, pine and cypress.

Another agency is the Uganda Wildlife Authority (UWA) which oversees national parks and game preserves. Like the central forest reserves, the national parks and games reserves comprise 15 percent of Uganda's forests and woodlands. UWA's priority is the conservation of natural areas and wildlife and has recently suspended harvesting of timber from national parks and game preserves. UWA's primary source of revenue generation is from the collection of entrance fees and wildlife viewing permits. There is some very limited revenue sharing between UWA and local communities. In addition to revenue sharing, UWA has been working with communities that live in areas adjacent to parks and reserves to develop co-management agreements that allow for the collection of water, wild foods, fuel wood and other forest products.

The third agency is the District Forest Service which is responsible for managing the remainder of Uganda's forests and woodlands, including private forest and woodlands as well as local forest reserves. The District Forest Service also provides technical advice to private land owners and communities interested in managing their forests. All the Districts are expected to employ a District Forest Officer (DFO), forest rangers, and forest guards as they see fit. Though they have the largest land area to cover, the DFS is seriously lacking in both human and financial capacity. Not all districts employ DFOs, and where there are found they generally work alone, with no transport or budget to support advisory services for timber harvesting, forest extension work, the distribution of tree seedlings etc. The National Tree Planting Act (2003) gives serious attention to the notion of communities forming associations for the management of forests, and for the provision of incentives that will encourage private land owners to maintain their land as forests or woodlands. However, given the scarcity of time and resources of the District Forest Officers (in districts where they are present), the ability of the DFS to facilitate such trends in the management of private forest lands seems unlikely.

Both the National Forest Authority and the District Forest Services are overseen by the Forest Inspection Division (FID) which is a technical arm of the National Environmental Management Authority. Unfortunately despite its important position the FID has only six personnel all based in Kampala, the capital city, and operating on very limited financial resources. It is difficult therefore for the FID to take action even when they identify discrepancies between policy objectives and what is happening on the ground.

The extent of Forest Decentralization

Before the decentralization policy was implemented in Uganda, all forests in Uganda were managed by the central government which was also responsible for all operational funding. The central government issued all harvesting permits and collected and kept the revenues. In addition to recruiting and managing district staff, it was also responsible for determining when and where to harvest and the tools to be used in the harvesting process.

During the first phase of decentralization, the management of forest reserves was passed onto the district local governments. Decentralization of forest management meant that the local government was responsible for funding all operations regarding forest management. The districts local governments were also responsible for issuing harvesting permits, collecting all fees, recruiting and managing the district staff. They would also determine when and where to harvest in the forests. Due to lack of adequate funds, the local government decided to increase harvesting from both forest reserves and private forests so that more revenue could be generated. Forests were mostly seen as sources of revenue to fund development activities in other sectors like health, education, and roads that had been decentralized. All revenue collected from the local forest reserves was kept by the local government while 40 percent of the revenue from central forest reserves was kept by the local government and 60 percent given to the central government. It was hoped that this would encourage re-investment of forestry revenues directly in the local areas where it had been generated. And if properly collected and reinvested, the share for the district local governments could have a substantial impact if it was reinvested. Unfortunately very little was reinvested in the forestry sector.

This phase of decentralization resulted in the central government being the main recipient of forest revenue collected from the forest reserves, followed by the local government at the local council (LC) 5 level (District level). In most districts, the 40 percent of revenue that was retained at the district level (LC 5 level) was rarely passed onto lower levels (LC 3) (Sub county level). The equitable sharing of forest revenue with the lower levels was rarely considered, so local government at the LC 3 level and the District Forest Offices did not benefit directly and had limited control over the forest revenue that was collected.

The recent phase of decentralization also brought its own set of changes. In reality this was only a partial decentralization of forest management because both the central government and the local government are responsible for the management of forest reserves. While the local government took over the responsibility of managing all forest reserves less than 100 hectares in size (local forest reserves) and overseeing private forests, the central government is responsible for managing forests bigger than 100 hectares (Central forest reserves). In total it is estimated that there are 196 local forest reserves totaling under 5000 ha and 542 central forest reserves totaling 1,455,130 ha.

With regard to Central forest reserves the National Forest Authority on behalf of the central government has the responsibility of issuing permits for commercial harvesting of products from CFRs and collecting the related fees. In turn these fees are shared between central government (60 percent) and local governments (40 percent). The rationale of giving local governments 40 percent is that they are supposed to help in policing of forests against illegal harvesting of forests resources. This revenue however usually remains at the higher levels of local government and rarely trickles to the local communities. This is unfortunate because it is the parishes or sub-counties adjacent to the forest reserves that bear most of the costs and responsibility for forest protection and yet do not benefit from revenue collection.

The district local governments are responsible for managing the local forest reserves as well as overseeing private forests and woodlands. The local government keeps all the revenue obtained from local forest reserves and issuing of permits for harvesting products from private forests. The amount collected is however still considered inadequate. Despite the autonomous decision-making powers of local governments, most of their budget (up to 90 percent in many districts) still comes from the central government through grants and donor funds. Unfortunately this means that most of the priorities of the local governments reflect those of the central government to the extent that even forest-rich districts are not investing in the development of these revenue sources as they should. In the districts that have substantial forest resources, complaints have come from the communities living near forests that they were not getting any money nor was it being used to develop the communities.

Research Design and Data Methods

This study uses data collected over time under the International Forestry Resources and Institutions (IFRI) research program to analyze the impact of decentralization on local people in Mpigi District. The program is a multilevel, multi-country, over-time study of forests and institutions that govern, manage, and use the forests. The study focuses on one country and uses data collected by the researcher and scholars at the Uganda Forestry Resources Institute (UFRIC), Makerere University, one of the collaborating research centers for IFRI. The data were collected in two parts in accordance with IFRI protocol (Ostrom and Wertime 2000). One part involved collecting data about the social and economic attributes while second part involved conducting very careful forest mensuration using random samples of forests parts. Data on social attributes were collected using the participatory rural appraisal (PRA) methodologies, and group discussions.

To get a sense of the effect of institutional changes at the macro level on forest use and management at the local level six forest sites with eight forests were chosen in Mpigi District. The forests studied are managed under different institutional arrangements. They included two private forests, two government owned forests, two sacred forests and two forests managed under mixed institutional arrangements (See Table 3 below). While not exhaustive, this group covers a broad range of different types of institutional arrangements. Moreover, the forests chosen all have data collected every 3-5 years since the mid 1990s. This time series data is important in understanding the changes in property rights that resulted from institutional changes.

Table 3: Forest Sites and Date of Visits

Forest Name	Forest Area (Ha)	Institutional arrangement	First Visit	Second Visit	Third Visit
Mpanga	500	CFR	1994	2000	2004
Lwamunda A	120	CFR	1993	1997	2004
Butto_Buvuma	453	Mixed ¹	1993	2001	2005
Mugomba	150	Mixed ²	1995	2000	2005
Najjakulya	50	Private	1995	2000	2005
Namungo	40	Private	1993	1997	2004
Magezigoomu	20	Sacred Forest	1994	2000	2004
Mukasa	2	Sacred Forest	1994	2000	2004

¹. The forest was originally managed as a government forest reserve but with some collaboration with local people but now being managed as a central forest reserve.

². This forest has for a long time been managed as a central forest reserve but recently was leased to private owners to plant tree species. Due to recent country wide structural changes Mugomba forest now belongs to Wakiso District.

Because of my interest in coping mechanisms, a new instrument was added to my research design which involved carrying out in-depth interviews with Local residents, Local Council (LC) officials and forest officers. A snow ball approach was used to obtain the informants. In building the snow ball sample, Local Council leaders at the village level were approached and requested to suggest an elder in the village that was informed about issues of decentralization and forest resource use. Once the first person was interviewed, they then recommended other people that could be interviewed. In an effort to reduce selection bias some respondents were also identified during PRA and group discussions. Although many women did not say much during the PRA it was easy to identify those that knew a lot about issues of decentralization and forest resource use. Efforts were made not only to seek out these individuals but also those that said nothing but did not seem to agree with what was being discussed during PRA. In each forest site 25 interviews were carried out totaling 150 interviews. Fifteen more interviews were carried out with forest officers at the National Forest Authority and district forest officers. The questions in the interviews were designed to capture the impacts of institutional changes on property rights to

forest resources. In an effort to understand why coping mechanisms were necessary and what specific coping mechanisms were adopted by the local people, IFRI data and the data from the in-depth interviews were utilized.

Coping with the effects of Decentralization Policy

Many rural people in Mpigi district are highly dependant on forests for essential subsistence needs as well income generation through the sale of forest products. Products such as fuel wood, fruits, nuts, fibers, water and poles for construction can be harvested by everyone as long as they are used for subsistence purpose. In the study area, all the residents depend solely on the forests for firewood and water and have no other alternative source of these products. This shows how important these resources are to the local people and why changes in the institutional setup would greatly affect them.

Information gained during indepth interviews revealed that it is the commercial extraction of timber resources that results in meaningful benefits for local communities because timber can be sold to generate cash income which is required to obtain many essential household items, such as food, farming equipment, health care, and school fees. Commercial extraction of timber resources, however, requires special harvesting permits from the government. Obtaining the permits is a difficult and costly process which many local communities cannot afford. The National Forest Authority on behalf of the central government issues permits for harvesting from the local forest reserves on recommendation from the local government and district forest officers. The permits have a time limit and cost money which very few local people have. The fact that most people in the villages are not highly educated means there are not many alternative ways of earning incom. Many families have for a long time depended solely on the forests for any income. This has resulted in many local people resorting to illegal harvesting of forest resources or trying to have a special arrangement with the forest ranger who is usually a resident in the village and can be found by the local people easily when needed.

The respondents were asked whether or not they felt that decentralization of forest resources was beneficial to them. 65 percent of the respondents felt that they did not benefit from decentralization, while only 25 percent felt that they did. The remaining 10 percent did not see

any difference in their property rights. Several reasons were given for failure of decentralization to address their problems. One of the most common reasons volunteered by respondents during in depth interviews was the fact that although decentralization promised better access to resources by the local people and an input of local people's views in forest management, not one of these were realized. Many local people complained that since the recent policy change, access to forest products has been greatly reduced especially in the central forest reserves. When decentralization was implemented, very little sensitization was carried out which has left a lot of people confused about who now manages the forests and what rights they have. When forest resources were still centralized, the local people had de jure rights to use the forest. The new changes have meant that new officers are in place with stricter rules making access to the resources limited.

Moreover, the local people including their representatives do not have any say in forest resource management. There are not consulted at all regarding forest management or use. Many people complain that decentralization was really all about bringing the central government to the local level and not encouraging participatory forest management. Most of the forest officers are from different parts of the country which according to the local people makes these officers unconcerned about local people's needs or even the sustainable management of the resources. The local people allege that it is the forest officers themselves that are responsible for most of the deforestation that is taking place in the forests. This is especially true with regard to local forest reserves.

The elected local representatives rarely represent local communities in significant matters of natural-resource management. Their powers remain highly limited. Uganda's proposed Forestry Law of 2001 does not specify guidelines for selecting powers that will be transferred nor the levels of local government that will receive them. Although the laws give local authorities the right to manage natural resources, they are subject to restrictive requirements imposed by the central environmental agencies. This problem is exacerbated by the fact that the money obtained from the forest is not invested into local community projects but is taken back into the district budget which tends to have different priorities from the local people. The 1997 Local Government Act defines a statutory formula for the distribution of locally generated revenue in

the districts. While 35 percent is retained by the district level the remainder is divided between the county, the sub county (LC 3) and the village level. The sub county receives two thirds of the revenue. Francis and James (2003) found that communities share of local revenue is very small and assert that in a typical village of 100 households, the local council's share of graduated tax would be approximately Uganda shillings 89,000 (or only US\$50) per year. This is further depleted by the costs of traveling to collect it from the sub county headquarters. Many local council committee members have complained that they rarely receive the full share of locally collected taxes. Currently only a few districts have started funding nurseries at local levels from local government development grants that come from the central government. One of the main problems that district forest officers highlighted was the fact that forestry is not a top priority to the local government. Other sectors such as education, road construction, agriculture are considered critical and tend to get a bigger portion of the budget. Because of this, staffing at local level has significantly reduced.

The local people also feel that although decentralization has benefited the rich in their communities, the local people have been made worse off because they have no alternative sources for products that they originally obtained from the forest. The rich people in the community own big pieces of land and have money hence can easily obtain permits to harvest from the forests or bribe their way out of any problems that might arise. On the other hand, the poor find it difficult to make commercial forestry profitable. This can be attributed to two main reasons; 1) they lack resources including vehicles and harvesting machinery to harvest enough to be profitable and 2) many do not have money to buy harvesting permits.

According to the local people bribing to get access to forest resources or transport forest products harvested illegally is not uncommon. This was however vehemently denied by the forest officers although many of them admitted to being unhappy with their jobs. The back and forth changes in institutions have created tenure insecurity. Many forest officers admitted to feeling to feeling insecure about their jobs and reported that the NFA has had a high turnover rate since it was put in place. The NFA officers were also unhappy to be working in hostile communities and felt that their jobs were dangerous.

At the time of the interview, the DFS had not been approved by the parliament which meant that the DFO were actually not formally employed. There seemed to be limited morale for monitoring and enforcement of rules by the forest officers. Many local people have complained that it is the officers that have grabbed most of the forest resources and sold them to people that live outside the communities.

Another common complaint among the local people is that since decentralization, the local officers in charge of forest management seem to be only interested in dealing with people that have money. Poor people who do not have money are not assisted in any way. Unfortunately, commercial timber businesses cannot be successful if one does not have enough capital. Money is needed to ensure that enough forest products are harvested from the forest making transportation to towns for sale profitable. Although it is easier to sell timber in the forests, buyers offer a lower price than would have been obtained if it had been sold in major towns.

As explained above the second era of decentralization in Uganda meant that only the forest reserves less than 100 hectares were decentralized. The forests that were decentralized do not have as much commercial value as the central forest reserves. This has significant implications at local level. With the new change there is stricter monitoring and enforcement in the government owned forests. Furthermore, withdrawal of products by local people has been limited because they can no longer legally take harvesting tool into the forests. This has greatly limited how much product they can harvest from the forest. This has had tremendous effect on the women who are responsible for ensuring that these products are available in the homes.

Despite the stricter monitoring and enforcement in the government owned forests, a lot of illegal activities are taking place in both government and non-government forests (See table 4 below). The only forest that seems to be safe from illegal harvesting is Mpanga central forest reserve and this is because this forest has always been managed as a reserved forest and harvesting from the forest was always minimal and the local people accepted this. Furthermore, the NFA has been known to employ the army to protect this forest where illegal activities have been suspected.

Table 4: Descriptive statistics for the forest sites

Forest Name	Forest Type	Forest Stock Assessment ^a	Trend in Forest Condition ^a	Causes of Forest Condition according to local users ^b
Mpanga	Government	Above average	Improving	- more strict forest monitoring
Lwamunda	Government	Above average	Decreased	- illegal pit sawing - illegal charcoal burning - agricultural encroachment
Buto Buvuma	Mixed	Below average	Improving	- Abandoned encroached areas - No trees of commercial value
Mugomba	Mixed	Below average	Decreased	- clearing for Eucalyptus establishment - over harvesting by private individuals
Najjakulya	Private	Below average	Decreased	- illegal pit sawing - agricultural encroachment - pole cutting
Namungo	Private	Average	Decreased	- timber harvesting - charcoal burning
Magezigomu	Sacred	Above average	Decreased	- agricultural encroachment - part of forest sold - harvesting of commercial firewood
Mukasa	Sacred	Above average	stable	- no harvesting of poles or timber

a. Assessed by a forester based on tree density and speciation during the period of the study and cross-checked where possible through interview with District Forest Officers and NFA officers

^b Derived from in-depth interviews with user groups in the area and also from observations while doing forest menstruation.

The major initial impact of decentralization seems on forests under mixed institutional arrangement category. Since decentralization Buto Buvuma forest is improving because the NFA has increased the monitoring and enforcement of rules in CFRs which in turn has resulted in many of the encroached areas being abandoned. Local people also do not feel there is a need to go to this forest now because it now contains any trees of commercial value. Although Mugomba forest was leased to private owners who are putting in more effort in protecting their leased land

from illegal harvesters, most of the land owners have cleared the land to plant fast growing species such as pines.

The major secondary impact of decentralization is on private forests. This was an unintended impact because the decentralization policy was not meant to affect private forests. Harvesting of timber, firewood and poles now seems to be more concentrated in the private forests. This also has long term implications because although the private forests constitute 70 percent of the total forest estate in Uganda there are no rule and regulations regarding what and how much can be harvested at any one time.

Coping Mechanisms

From the discussion above, it can be noted that decentralization has resulted in limited access to forest resources by the local people. This section gives a brief discussion of coping mechanisms that have been adopted by the local people. Table 5 below highlights the most common coping mechanisms. Results in this table were obtained by coding what was mentioned as the primary mechanism of coping mechanism by respondents during the in depth interviews.

Table 5: Various coping mechanisms adopted by the local people after decentralization

Coping Mechanisms	Number of Individuals (n)	Percentage
Use private forests	36	24%
Use other government forests	21	14%
Illegal harvesting	21	14%
Different Business	18	12%
Planting own trees	14	9%
Cook one meal a day	14	9%
Improved stove	11	7%
Capital city for job	7	5%
Different Energy	4	3%
Buy Products	4	3%
Total	150	100%

Source: In-depth interviews carried out by Author

Most of the respondents indicated that they had turned to private forests for resources they used to harvest from the forest reserves. Looking at coping mechanisms therefore enables us to explain some of the data shown in table 4 above. Private forests are becoming more and more

degraded as harvesting efforts are turned to them. Currently, there are many private forests in Mpigi District but given the current rate of harvesting their sustainability is in question. Although private owners do require a permit to harvest and transport forest products from their land, there is no limit on how much one can harvest from their forest. The private owners mostly do not charge the local people for harvesting firewood and poles for subsistence use. But as wood resources become scarce, many of them are now forced to limit the amount that the local people can get from their forest and how often they harvest products from their forests.

Due to lack of alternative sources of income, many youth admitted to illegally harvesting forest products especially timber and charcoal as a means of survival. Although this is happening in all forests, there seems to be more illegal harvesting in the central forest reserves. The main reason given by the local people for this was the fact that the central forest reserves are bigger and thicker than the local forest reserves and therefore one can easily carry out illegal activities without being caught. Although decentralization is meant to have resulted in better management, monitoring and enforcement of forest resources, illegal activities are on the increase. The revenues from illegal harvesting seem to confirm this.

Table 6: Government Revenue Collected from Impounded, Illegally harvested Forest Products

Resource	Total Revenue (Uganda Shillings)			
	1996/97	1997/98	1998/99	2004/2005
Impounded Timber	210,129,038	105,678,472	69,558,611	917,000,000
Impounded Charcoal	-	893,100	2,119,800	16,925,000
Impounded Fuel wood	-	-	312,000	1,250,000

Source: National Forest Authority (2005)

On average, 1700 Uganda shillings is equivalent to One (1) US Dollar

Interviews with several forest officers working with the National Forest Authority revealed that monitoring and enforcement in Central Forest Reserves is becoming more and more complicated and dangerous as the local people become desperate for forest resources. Most illegal harvesters confessed to going into the forests at night to harvest products. The forest officers reported while monitoring the forests, both during day time and at night, many of them had been injured. The

NFA has deployed the Ugandan Army several times to intervene in situations that are deemed dangerous.

The private forest owners have also complained that there is now an increase in illegal harvesting of products taking place in their forests. Illegal harvesting of products from the forest especially of timber and charcoal will in the long run adversely affect the poor people because the harvesting is carried out without discrimination. Both young and old species of trees are cut without discrimination as long as they are found in places where detection by forest offices is difficult.

A more promising coping mechanism that has been adopted by the local people is the planting trees with a hope that they will provide the products they previously obtained from the forests. Unfortunately, this does not address the problem of finding products for use immediately. Planting of trees is also hindered by both tree and land tenure insecurity. The fact that many residents have been arrested by the NFA because they have harvested tree products from their land without permits has discouraged many local people from planting trees. They feel that NFA will take away not only the trees they plant but also their land. This has also resulted in local people being unreceptive to efforts by non governmental organizations to help them. Most of the people in the study sites were poor and did not own land and were merely tenants and are worried that any time the land owners can take their trees once planted.

An analysis of the notes from the in-depth interviews revealed that 9 percent of the local people are now cooking one meal a day. The main reason given for this was lack of finances to purchase alternative cooking materials such as charcoal or paraffin. Women and children who have the responsibility to fetch the firewood and cook complain that they now have to walk longer distances to obtain enough firewood. Cooking one meal a day reduces the time spent looking for firewood. Moreover, since the reform, many women and children have been harassed by the NFA officers which has resulted in the need to carry out joint harvesting for safety purposes. Several households now set a side a time to go harvesting in groups which is not always convenient for all.

Conclusion

This paper address an important issue in political economy and natural resource policy: how do institutional changes such as decentralization affect the poor? Although it has been argued that decentralization can improve the socio-economic and political state of local communities, there have been many reforms in the name of decentralization that have not delivered the expected outcomes of decentralization and have undermined the efforts to improve the lives of poor people. The paper investigates this premise in the context of Uganda.

One of the main questions asked in this paper was whether or not decentralized policies improve the lives of the rural poor. The general answer to this very question seems to be no but one could also argue that it depends. If decentralization is implemented properly after a careful analysis of the condition on the ground and measures are put in place ensuring that there is a source of livelihood for the local people, then decentralization could indeed improve the lives of local people. The findings in this study indicate that in Uganda decentralization was implemented without careful assessment of the attributes of a resource system and of the individuals using the forest resource which resulted in failure to obtain desired outcomes. Not only did incentive structures become perverted but also the people who really needed these resources for their livelihood were further alienated, making it impossible for them to use the forest resources. The result was the adoption of coping mechanisms that have led to more degradation of forest resources.

One of the main lessons learned from this study is decentralization on its own may not improve the lives of rural people nor is it likely to lead to sustainable management of forest resources. Decentralization needs to be implemented in an enabling environment for it to have the desired outcomes. This study has shown that incentive structures at the local level are powerful determinants of governance outcomes. Furthermore, reforms need to assign the local users significant property rights if they are to be successful. There is a need for the users of the resource to be involved in designing of the rules that will govern the use of the resource.

It is also important to recognize that property consists of multiple bundles of rights which affect the behavior of resource users differently and that the right to alienate a property is a very

important but not the only relevant right. An assessment of forestry user groups would show a great degree of variability in rules, use rights, etc. One should therefore question the appropriateness of institutions that all had the same use rules irrespective of ecological or social variation. Ostrom *et al.* (1994) assert that any one comprehensive set of formal laws intended to govern a large expanse of territory and diverse ecological niches is likely to fail in many of the habitats where it is supposed to be applied. This statement shows the need to fashion policies which provide a general framework allowing for local flexibility to be accommodated.

However, this analysis is inconclusive in some of its results regarding what impact decentralization has had on the country's forests. Future research could supplement this study by expanding the institutional analysis initiated here. One approach that would add to the efforts in this study would be the incorporation of information about the forest users' decision-making prior to the decentralization reforms.

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