Institutional and Legal Factors Affecting Environmental Management in a Decentralized System of Governance: A Case of Wetlands in Uganda

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Abstract

Decentralization of natural resource management is considered by many development agents, researchers and environmentalists, as a way to improve efficiency and equity in natural resource management. Under the decentralization system of governance that Uganda adopted in the 1990s, the management of natural resources was also decentralized. In this regard, Uganda has undertaken several initiatives in a bid to delegate natural resource management responsibilities to local governments and build local capacity for this purpose. The initiatives have ranged from development of an institutional framework for environmental management such as National Environment Management Act (1995), the Land Act 1998, and the Local Government Act 1997 among others, to establishment of funding mechanisms for wetland management both at the Central and Local Government levels. In spite of these efforts by the Government, the level of environmental management in a decentralized framework is still unsatisfactory. There is evidence of massive wetland encroachment, and the anticipated benefits from wetlands management have not been realized. This study was conducted to examine the extent to which funding mechanisms, human resource capacity and legal framework influence environmental management in a decentralized system of governance. Both quantitative and qualitative data were collected; analysis was done using correlational analysis and content analysis for quantitative and qualitative data respectively. Findings revealed that all the three variables under investigation had a moderate significant relationship with effective environmental management. The findings were corroborated by responses from various stakeholders interviewed in the course of the study. The study recommends that both the central and local governments should develop a sustainable funding mechanism and an efficient planning and budgeting system; develop strategies for attraction and retention of key professional staff in environmental management and streamline existing legal framework for natural resource management in enhancing sustainable environmental management in the country.

Key words: **Decentralized Governance, Natural Resource Management, Human Resource Capacity, Institutional Factors, Uganda**

Introduction

Over the past two decades, decentralized systems of governance initiatives in Africa and other developing countries have ostensibly been aimed at giving greater decision-making powers to actors in local governments. Such decisions have included those regarding natural resource management (Agrawal, 2001). Decentralization is also considered to contribute to good governance. The term "governance" tends to be defined differently depending on contexts. Broadly, it is considered to be capacities in societies in which various stakeholders

attempt to seek solutions that can bring positive outcomes for those who are concerned. Good governance can therefore be established when stakeholders reach a reasonably clear common vision, which guides their actions for mutual benefits (Saito, 2001).

Local elected officials in decentralized units are expected to be motivated to take decisions that reflect the needs and expectations of the people that elect them to positions they hold. Supporters of the decentralized system of governance argue that it promotes efficiency, equity and increased local participation in decisions that affect local lives and livelihoods (Larson & Ribot, 2004; Ribot, 2002) including natural resource management. Emphasizing the importance of local governments participation, Markovska and Duic (2014) note that studying the interactions between local government institutions and civil society in achieving sustainable local development has shown that sustainable local development planning, although still lacking the proper methodological approach and facing insufficiencies in institutional and implementation capacities, is becoming more appreciated by local authorities.

Globally, wetlands have important values both to human beings and to the ecosystem. Wetlands are useful in ground water recharge and discharge, flood control, sedimentation or nutrient and toxicant retention, biomass export, recreation or tourism, storm prevention or wind break, micro climate stabilization and water transport (Dugan, 1990; Apunyo, 2006). In addition, they are a source of various forms of resources including forest resources, wildlife, fisheries, forage, agriculture, and water supply. Wetlands also provide essential habitat for species of birds and mammals that are hunted, and this gives them economic value. Further, they are a source of biological diversity and culture or heritage. Despite the vital values of wetlands, their degradation seems to be on the increase. The major threats to wetlands have been drainage, settlements, industrialization, pollution, ground water abstraction, siltation, burning and over-harvesting.

This study aimed at examining the factors affecting effective environmental management in a decentralized system of governance in Uganda, with a major focus on wetland resources. Uganda's National Policy for the Conservation and Management of Wetland Resources (1994:4) defines wetlands as areas "where plants and animals have become adapted to temporary or permanent flooding". It includes permanently flooded areas with papyrus or grass swamps, swamp forests or high-altitude mountain bogs, as well as seasonal floodplains and grasslands. While all wetlands are characterized by impeded drainage, the length of their flooding period, depth of water, soil fertility, and other environmental factors vary with different wetland types. Wetlands are home to distinctive plant and animal communities that are well adapted to the presence of water and flooding regimes.

The loss of wetlands worldwide has been estimated at 50 percent of those that existed in 1900. Much of this loss occurred in the northern temperate zone during the first half of this century. However, since the 1950s tropical and sub-tropical wetlands, particularly swamp forests and mangroves, have increasingly been lost (Global review of wetland resources and priorities for wetland inventory, Summary Report 2010). In Africa, Nhamo and Inyang (2011), note that some wetland areas are experiencing immense pressure from human activities, the most important being drainage for agriculture and settlement, excessive exploitation by local communities and improperly planned development activities. In 1964, the total area of wetlands

in Uganda was estimated at 32,000 sq.km; but by (2008) it had reduced to 26,308 sq.km Such undesirable developments prompted Wood et al (2013) to advocate for a people-centred wetland management approach, whose primary concern is not centred on environmental outcomes but on sustainable use of natural wetland resources.

Decentralization of natural resource management is considered by many; development agents, researchers and environmentalists, as a way to improve efficiency and equity in natural resource management (Ribot, 2002). Environmental resources are most of the time crucial for the livelihoods of people in developing countries (Larson & Ribot, 2004). Many depend on natural resources for food and income-generating activities. With the decentralization reforms that many developing countries have implemented, the management of natural resources has been decentralized. Decentralization reforms in natural resource management affect people in ways of access to, use and management of natural resources and influence their perception and way of expressing concerns towards natural resources. Because many people depend on natural resources, it is important for them to have a voice in the management and decisions over the natural resources they depend on (Ribot, 2002).

The decentralization of natural resource management in Africa is located at the intersection between good governance and democracy, development and poverty alleviation, and community-based resource management and local resource rights. Many environmentalists consider the local community to be the most appropriate custodian of environmental management since they "are better able to understand and intervene in environmental problems because they are 'closer' to both the problem and the solution" (Lane & McDonald, 2005: 710). Under decentralization, various responsibilities, including environmental management, are devolved by the centre and imposed in a unilateral manner on the local governments and communities, many of whom remain reluctant to perform these tasks. The decentralization of environmental management in Uganda, therefore, cannot be considered equal to "participatory" environmental governance (Oosterveer et al., 2010).

As a result, there are still a number of challenges affecting the management of the environment in Uganda and the benefits envisaged from the decentralization system of governance in the natural resources sector have not been fully realized. The degradation of the environment has continued unabated, threatening the sustainable utilization of such resources and the local governments have not put in place concrete measures to address this predicament. It is against this background that this article set out to answer the following research questions:

Research question 1: What is the relationship between funding mechanisms and effective environmental management in a decentralized system of governance in Uganda?

Research question 2: What is the relationship between human resource capacity and effective environmental management in a decentralized system of governance in Uganda?

Research question 3: Does the existing legal framework have implications for effective environmental management in a decentralized setting in Uganda?

Review of literature

The literature underpinning this study is drawn from the Liberal Theory of decentralization which has its origins in the modernization discourse. It was advanced by American scholars such as W. W. Rostow, Talcott Parsons and David Easton. The theory recommends the existence of elected bodies as the means of realizing democratic decentralization. The neo-liberal stance of the World Bank supports this view together with the International Monetary Fund. Other scholars such as Crook and Sverrisson (2001), Manor (1999), Shah and Theresa (2004), Crook and Manor (1998) agree that the fatigue for centralized governance calls for decentralization of government powers, functions and processes to local units as a source of broader participation in democratic governance (Smoke, 1994; Wunsch, 2001). It is therefore in the same vein that the government of Uganda had to decentralize the management of wetland resources in the 1990s so that communities could fully participate in their management. The main argument here is that democratic decentralization offers the opportunity for greater local participation, breeds a healthy political understanding, effective debating and future planning. Indeed, under the decentralized system of governance, local communities have been given an opportunity to manage the environmental resources. Entrusting local institutions with environmental decision-making, rule-making and adjudication contributes directly to the building of democracy. Without powers, local governments cannot gain the legitimacy they need to effectively represent local populations.

Mali and Uganda, respectively, provide Francophone and Anglophone cases of progressive decentralization, in which democratically elected local governments have been established as the recipients of decentralized powers. In Mali, however, the environmental service (*Direction National de la Conservation de la Nature*) is still reluctant to transfer significant powers to elected local governments to manage environmental aspects (Ribot, 2003). Similarly, in Uganda, Namara and Nsabagasani (2001) observe that powers transferred to local governments are limited. Uganda's Forestry policy of 2001, for example, does not specify guidelines for which powers, if any, should be transferred and to which levels of local government, making it difficult to foresee the kind of decentralization that the new reforms will result in (Ribot, 2001). In both cases, the laws give local authorities the right to manage natural resources, but under management requirements and plans imposed by the central environmental agencies.

Zutsi and Sohal (2004) conducted an extensive study to determine critical success factors for effective environmental management. Their findings revealed that key factors include top management leadership and support, organizational vision, resource allocation, and capacity building. Based on Zutsi and Sohal's (2004) study, this research investigated how funding, human resource capacity and legal framework relate to environmental management in a decentralized system of governance. Extant literature concerning the three levers of environmental management is dealt with in detail in respect of how they relate to environmental management.

Funding and decentralized environmental management

For environmental resources such as wetlands to be effectively managed and conserved, there is need for sufficient funding to the sub-sector. Many national governments, especially in third world countries, have continued to allocate a small share of their budgets to the ministries

and departments responsible for wetland resources and this has directly impacted on their management.

In Uganda, the Water and Environment Sector continues to be allocated a declining proportion of the overall annual national budget. While the sector was allocated 7.4 percent of the national budget in 2003/4, this had dropped to 3 percent in 2008/9. In the 2013/2014 (GOU Budget Framework Paper, 2013/2014); the figure has more or less remained the same at 3.3 percent of the total budget. The meagre allocations are taking place in the face of increased risk of dwindling wetlands in the country. Local governments are supposed to use their own resources to put in place environmental management structures such as district environment committees and sub-county environmental committees, as stipulated in the law, and to develop environmental plans. However, according to Nyangabyaki (2003) it is interesting to note that whereas some districts, such as Mbale and Masindi in Eastern Uganda and western Uganda, respectively, have succeeded in doing so, others, for instance Mukono in central Uganda, have not despite the fact that central Government fiscal transfer conditions are similar in both cases. Such a scenario could raise questions about the prioritization of environmental aspects. Environmental issues do not seem to be a priority area for most of the local governments; they are merely forced onto the districts. Masindi and Mbale have made reasonable advances because of donor funding (Nyangabyaki, 2003). Mbale District has received World Bank project funds. These funds, which were channelled through National Environmental Management Authority (NEMA), were used to procure office equipment and top up salary and allowances of the District Environment Officer. They were also used to fund the preparation of an environmental action plan, which was a participatory, "bottom up" process.

World Bank (2010) stresses that in Uganda; there is need for the Treasury and Development Partners to dedicate more resources to the environment sector. Taking into account immense importance of natural resources for livelihoods of Uganda's population– the environment and natural resources support the livelihoods of 91 percent of Ugandans. The funding challenges of the environment and natural resources sector are compounded by lack of transparency and accountability in the management of wetland resources in the country. The situation is further exacerbated by the abolition of the locally collected graduated tax in 2005, leading to increased use of conditional grants, for which the central government tries to influence and restrict "choice" and political space for local authorities by attaching strong conditions and supervision procedures to the use of such grants.

It is important to note that many governments rarely address environmental budgetary strategies and instead focus on sector-based technical issues such as health and education. In spite of the current requirements to mainstream environmental concerns in development plans and budgets, most treasuries and planning authorities in the third world rarely allocate adequate finance for environmental investment. This has in turn led to laxity on measures to protect the environment, leading to environmental degradation. Uganda is confronted with similar problems. In the case of wetland management, Andeweg (2006) found that local governments are responsible for planning and budgeting for wetland management activities, but the funding for these activities is allocated by the central government. The lack of fiscal decentralization, therefore, constrains adequate environmental and natural resource management at the local level.

A related challenge is manifested in the lack of a mechanism to reconcile local authority (horizontal) and sectoral agency (vertical) responsibilities and activities; which undermines the coordination of resources that should enhance environmental management. In practice, sectoral programmes are financed and monitored by a central ministry in collaboration with other agencies and implemented independently from local authorities; genuine central-local partnerships that make use of the comparative advantages of local governments could enhance the planning and implementation of these programmes (Romeo, 2003).

Human resource capacity and decentralized environmental management

Human resource capacity is considered a key factor for sustainable environmental management. There is need for sufficient human resource, both in terms of numbers and skills in the decentralized units to be able to effectively undertake the role of protecting, conserving and proper management of environmental natural resources. With the advent of the decentralized governance system in Uganda, positions of district environmental/wetland officer were established but they are not well facilitated to undertake their responsibilities effectively. Nickols (2003) says there are many factors affecting employee performance, namely, goal clarity, repertoire and knowledge of structures. However, for this study, and in respect of human resource capacity, only issues of staff numbers, skills development and motivational aspects were considered. Human resource capacity for natural resource management in local governments is inadequate, which prompted Conyers (1990) to posit that "…. It is frequently argued that *effective* decentralisation should not take place until the necessary capacity exists; but this tends to be a 'chicken and egg' type of argument, since more often than not it is only the pressure of decentralisation which motivates the action necessary to improve capacity—and motivates the existing staff and the local level to recognise their own potential and demonstrate their real abilities" (Conyers, 1990: 30).

The public sector in Uganda is characterized by weak performance and poor accountability. There is a duplication of functions and procedures and organizational compartmentalization. On the human resource side, the public service experiences a wide skills gap, weak management and a shortage of high-level managers and skilled professionals (http://www.opm.go.ug/departments.php). Several reviews at sectoral level as well as the annual decentralization reviews and the Public Service Reform Programme have also identified challenges and weaknesses in the coordination of the various reforms.

Understaffing in the natural resources sector has a negative impact on service delivery under decentralization, both at national and local government levels. The Wetland Management Department which is the umbrella institution for wetland management in the country, for instance, has only 16 established public service personnel (WMD, 2010).

Inadequate staffing in most districts across the country is affecting the implementation of key government programmes. According to Gamwera (2010), the Secretary General of the Uganda Local Governments Association, a survey carried out by the Uganda Local Government Association (ULGA), established that the average staffing in local governments is about 64 percent, which affects service delivery across the country. Moreover, most of the district staff are required to hold degrees in addition to other professional qualifications.

"Under the current law, most posts previously held by diploma holders require people with higher qualifications, at degree level at the lowest," However, according to the Uganda Local Governments Association (ULGA), even and retaining diploma holders to work at the sub-county level is proving to be very difficult.

This is exacerbated by low levels of motivation as observed in the limited facilitation and training opportunities that would enhance staff performance (WMD 2010: The Wetland Management Department report, 2010). However, people with high motivation learn to become capable while superior ability may not induce any motivation. Koontz and Weihrich (2005) argue that performance means productivity which is defined as output-input ratio within a time period, with due consideration for quality. It basically refers to efficiency and effectiveness of an individual in an organization's operations. The issue of skills requirement is also very important since most of the staff that are posted in the local governments do not get an opportunity to upgrade and improve on their knowledge base. In addition, there is limited provision by the local governments to sponsor their staff for further training. Consequently, such members of staff may not be updated on new and better ways of conserving the environment.

Legal framework and decentralized environmental management

Globally, Natural Resource Management is guided by international conventions, treaties and protocols that States and Nations subscribe to and domesticate in their legal systems as generally acceptable universal standards for enhanced sustainable environment and development. Uganda is a signatory to several international conventions and agreements relevant to wetlands conservation. These include among others: the Ramsar Convention on Wetlands, 1971, Convention on Biodiversity Conservation 1992, World Heritage Convention 1972, Convention on International Trade in Endangered Species (CITES) 1979, Agreement on the Conservation of African-Eurasian Migratory Water Birds, Convention to Combat Desertification, 1994 and Agenda 21, 1992.

Although the Government of Uganda is committed to international engagements for the management of natural resources, and specifically wetlands, little has been done to domesticate these treaties and protocols in national laws and as such implementation remains a big challenge. There are several relevant policies and laws that provide for the management and conservation of wetlands in Uganda. These include: the Constitution (1995), National Environment Statute (1995), Wetlands Policy (1994), Water Statute (1995), the Land Act (1998), Local Government Act (1997), the National Environment (Wetlands, River Banks and Lake Shores) Regulations (2000), among others. A number of statutory regulations have also been put in place to operationalize these laws and policies. The National Environment (Wetlands, River Banks and Lake Shores) Management Regulations 2000, The Environmental (Impact Assessment and Audit) Regulations, 2003, Water Quality Regulations, 2006, Waste Management Regulations, 2006, were published in pursuance of the National Environmental Statute 1995. These policies, laws and regulations have further provisions on the decentralization and management of wetlands.

The National Wetlands Policy 1994 is based on three principles: First, wetland resources form an integral part of the environment and their management should be integrated in the

overall development strategies and activities; second, conservation of wetlands can only be achieved through a cooperative approach that involves all concerned people and organizations in the country, including local communities; and third, present attitudes and perceptions of Ugandans regarding wetlands must change in order to successfully conserve and manage wetlands.

Apunyo (2006) stresses that Uganda's process in the enactment of environmental-related laws has a strong foundation guaranteed in the 1995 Constitution. For instance, the legal requirement for environmental impact assessment and the issue of environmental restoration orders to wetland encroachers in 2004 guided development project activities in the wetlands. However, effective implementation of these laws is faced with a number of limitations and challenges; the major limitation being political interference which undermines enforcement of laws. While the major challenges are a result of various laws scattered in the various national laws and general lack of awareness by the general population of these laws, this accounts for continued assumed individual ownership of wetlands which contravenes the constitutional requirement for the state to own and manage wetlands for the good of all its citizens.

In many developing countries such as Uganda, environmental laws are highly plagued by poor implementation, poor enforcement, and non-compliance as a norm rather than exception. It is a common phenomenon to see large pieces of wetlands being cleared for development while small holders are evicted ruthlessly. Apunyo (2006) further argues that the existing legislation is fragmented in the different laws. Access to these pieces by the general public is therefore constrained. The problem is further amplified by the high levels of illiteracy, estimated at 38 percent of the population aged 10 years and above.

Many of the already established environmental institutions lack power to punish or take action on environmental offenders. According to Muhumuza, (2000), the existing national environmental management laws are incompetent and vague with regard to providing for and taking action on environmental degraders. Matovu (2006) says there is a problem arising from failures at different institutional linkages for environmental management. Whereas, for example, wetlands are held in trust by Central Government or Local Government for the common good of the people of Uganda, recent examples of wetland abuse have included cases where local authorities have been the very violators of these constitutional and legal provisions. Where this has happened, local authorities have indicated that they converted wetlands for the sake of providing their communities with economic growth opportunities and fighting poverty. It is therefore a dilemma that the very institutions entrusted with the protection of wetlands have in some cases not assisted the crusade for their conservation.

Methodology

A case study design was adopted for this study. Sekaran (2003) stresses that case studies enable the researcher to give a holistic account of the subject being investigated. It provides an in-depth description of management of environment resources under a decentralised system of governance in Uganda using Mbarara District as a case study. The study employed both qualitative and quantitative techniques in sampling, data collection and data analysis for triangulation purposes.

With the help of multi-stage cluster sampling technique, six sub-counties/divisions were randomly selected from 16 sub-counties/divisions that make up Mbarara District. From the six sub-counties/divisions, two parishes were selected from each sub-county/division. Two villages were then selected from each parish. The final sample for the study was then selected from the village councils. In all, 24 village councils represented the district. Each village/LC1 consists of nine committee members which made up a total of 216 respondents at that level. A total of 96 respondents with a high literacy rate and better understanding of wetlands were given questionnaires. Out of these, 68 were returned in a usable form giving a response rate of 70.8 percent from questionnaires. The rest of the respondents (120) were arranged in 10 Focus Group Discussions (FGDs) of 12 members each. Data were therefore collected by the use of questionnaires, focus group discussions and documentary review. Validity was ensured through pre-testing of the tools while reliability was tested using the internal consistency method. This involved determining the Cronbach's Alpha whereby the (SPSS) computed value for each of the variables was as follows: 0.828 for funding; 0.626 for human resource; 0.770 for the legal framework; and 0.662 was reliability for environment management. According to Sekaran (2003), if the Cronbach's Alpha value is equal or above 0.60, then the instruments are deemed to be reliable.

Quantitative data were analyzed with the help of the Statistical Package for Social Sciences (SPSS) to determine underlying relationships between the variables of the study based on correlations that measure the degree of association of funding, human resource capacity and legal framework with the management of wetland resources in the decentralized system of governance. On the other hand, content analysis was applied to qualitative data where themes were collated from responses. Being a mixed methods approach, the intention was to determine the extent to which qualitative finding confirmed the findings from the quantitative analysis.

Results

The study set out to examine how funding, human resource capacity, and legal framework relate environmental wetlands management in a decentralized system of governance in Uganda by answering three research questions as laid out in section one of this article. The results are presented based on each of the research questions.

Research question 1: What is the relationship between funding and effective environmental management in a decentralized system of governance in Uganda?

To answer this question; the Pearson correlation analysis was conducted on data collected from the variables of funding and environmental management and Table 1 shows the results:

Table 1: Funding and Decentralized Environmental Management

		Effective environmental management	Funding
Effective environmental mgmt.	Pearson Correlation	1	.473**
	Sig. (2-tailed)		.000
	N	68	68
Funding	Pearson Correlation	.473**	1
	Sig. (2-tailed)	.000	
	N	68	68
**. *Correlation is significant at the 0.05 level (2-tailed).*			

The relationship between funding and effective environmental management was investigated using Pearson product-moment correlation co-efficient. There was a moderate positive correlation between the two variables ($r = .473$; $p<.000$).

The implication of this is that there is a moderate positive relationship between funding and effective environmental management. This finding is confirmed by key informants and participants of the focus group discussions that emphasized the role funding plays in ensuring that facilities are procured to facilitate environmental officers to undertake their duties. Funding is often required to purchase vehicles or motorcycles for monitoring environmental degradation, to purchase fuel without which the officers are merely carrying out desk work. It was also revealed by the informants that the District councillors and the environmental committees regularly require allowances for them to participate in environmental awareness campaigns and discuss bye-laws related to environmental management. This is consistent with Bracci and Maran's (2013) argument that the recognition of the importance of the environment management depends on the seriousness of the environmental problems, the social insights towards these problems and an increasing level environmental awareness.

Further, findings revealed that most of the funds required for environmental and wetland management in the case district come from the central government as conditional grants. According to the responses, 67.6 percent of the respondents admitted that, indeed, the funding for environment programmes in general, and wetlands in particular, is largely made by the central government. This means that these resources are directed to particular programmes in respect to wetland management activities and should therefore not be diverted to other activities. Indeed, 56 percent of the respondents testify to this. This has implications in as far as independent local decision-making on matters of effective wetland management is concerned and has indeed compromised on the sustainability of interventions since the funds keep on fluctuating as confirmed by 85 percent of the respondents. Only 22 percent and 13 percent of the respondents respectively acknowledge that the district/sub-counties allocate and prioritize wetland management for local revenue generation and allocation. It should also be noted that much as the wetland activities in the district are given less priority with respect to funding, the same little funds released are either diverted to other programmes or embezzled, thus affecting the effectiveness and sustainability of wetland conservation programmes in the district. This is confirmed by the perception of the respondents expressed as a total of 70 percent and 57 percent of respondents for diversion and embezzlement respectively. The above phenomenon

is corroborated by the interviews with political and technical heads who argue that with abolition of Graduated tax (GT); even realizing the 35 percent of budget allocation for ENR is an uphill task when it comes to implementation. *"Since the abolition of Graduated Tax in 2007, generating local revenue enough to cater for the councillors' allowances and cover the operation costs of sectors like environment has been the biggest challenge of this district administration". (P43)*

These findings concur with earlier studies conducted by Nyangabyaki (2003) who stresses that although local governments are supposed to use their own resources to put in place environmental institutions, such as district environment committees and sub-county environmental committees, as stipulated in the law, and to develop environmental plans, a few have succeeded in doing so. According to Nyangabyaki (2003), environmental issues are not a priority area for majority of the local governments; they are merely forced onto the districts. The districts that have made progress in effective natural resource management and wetland protection specifically have done so due to donor support. This also has its implications on local decision-making and long-term sustainability; which fears are echoed by Robinson (2007) thus: "decentralization in Africa has often failed, despite promising discourses, because of the over centralization of resources, limited transfers to sub national governments, a weak local revenue base, lack of local planning capacity, limited changes in legislation and regulations, and the absence of meaningful local political process".

Research question 2: What is the relationship between human resource capacity and effective environmental management in a decentralized system of governance in Uganda?

This research question was to examine the relationship between human resource capacity and effective environmental management in a decentralized system of governance in Uganda. To answer this question, the Pearson correction analysis was conducted on data collected from the variables of human resource capacity and environmental management and Table 2 shows the results:

Table 2: Human Resource Capacity and Decentralized Environmental Management

		Effective environmental mgt	Human resource capacity
Effective environmental mgt	Pearson Correlation	1	.422**
	Sig. (2-tailed)		.000
	N	68	68
Human resource capacity	Pearson Correlation	.422**	1
	Sig. (2-tailed)	.000	
	N	68	68
**. Correlation is significant at the 0.05 level (2-tailed).			

The relationship between human resource capacity in terms of skills, staffing levels and motivation and effective environmental management was investigated using Pearson product-moment correlation co-efficient. There was a moderate positive correlation between the two variables ($r = 0.422$; $p<.000$), implying that human resource capacity is moderately positively associated with effective environmental resources management in decentralized

system of governance. As the capacity for human resources improves, there is likely to be a corresponding improvement in the way the environment is management in a decentralized system of governance. This is attributed to the fact that staff numbers will be sufficient enough to undertake the responsibilities of a decentralized environmental managed function. In addition, improved human resource capacity implies that they have the skills and competencies required to implement and enforce environmental management policies and regulations. Skills, however, require to be continuously upgraded through continuous development offered by specialized agencies. As pointed out by Armstrong (2012); skills and numbers are not sufficient for effective service delivery. They have to be complemented by a high level of commitment that arises from the level of motivation that individual's exhibit.

From the assessment of human resource capacity in the case district in terms of staffing levels, a total of 76 percent of the respondents believe that the district has enough staff to handle effective environmental management activities. Although, the personnel provided for in the environment and wetland sector staff structure at the district are not all recruited as confirmed by 54 percent of the respondents, it can be said that with adequate facilitation of the existing personnel in the department and designation of sub-county focal point persons to take care of day-to-day management of wetland resources, a lot would be achieved in as far as effective and sustainable management of the environment is concerned. The biggest challenge is evident in the level of facilitation provided to the staff as one key informant remarked:

> *As far as the district is concerned, there is no need of recruiting more personnel in the Environment and Natural Resource department like the missing Senior and Junior Environment officers provided for in the structure, when we cannot even facilitate the two officers responsible for environment currently. If the resources were available, there are many officers at sub counties who would be designated and trained in environment and wetland aspects to handle natural resource management issues at lower local government levels*

There seems to be minimal collaboration between the political leaders and technical staff on the matters related to environmental management since they rarely hold joint planning meetings and inspection trips. The above views were generally cross-cutting among the FGDs that were held and this highlights the grave challenges faced in relation sustainable wetland management specifically and environment in general in a decentralized system of governance.

In terms of skills for the effective management of wetlands in the district, 54 percent of the respondents thought that the staff lacked requisite skills to sustainably manage wetland resources in the district. The inadequate facilitation and lack of continuous training and capacity building programmes for the staff to keep them abreast with the emerging issues in effective wetland management and conservation negatively impacted on the effectiveness of wetland management in the district. This was confirmed by 62 percent and 44 percent of respondents respectively. Staff motivation under human resource factor was another variable investigated in as far as effective wetland management is concerned at Local Government level. A total of 43 percent of the respondents believed the personnel at the district responsible for wetland management were mindful of the environment and actually loved their jobs,

whereas 19 percent of the respondents were not aware of the staff perception of their jobs. Motivation was further measured with questions on whether there was adequate facilitation, continuous training, technical support from the central government and regular supervision.

Research question 3: Does the existing legal framework have implications for effective environmental management in a decentralized setting in Uganda?

This research question was to examine the implications of the existing legal and regulatory framework effective on environmental management in a decentralized system of governance in Uganda. To answer this question, the Pearson correlation analysis was conducted on data collected from the variables of legal framework and environmental management. The results were corroborated with findings from focus group discussions and documentary reviews. Table 3 shows the results of the correlation analysis:

Table 3: Legal framework and Decentralized Environmental Management

		Legal framework	Effective environmental management
Legal framework	Pearson Correlation	1	.461**
	Sig. (2-tailed)		.000
	N	68	68
Effective environmental mgt	Pearson Correlation	.461**	1
	Sig. (2-tailed)	.000	
	N	68	68
**. *Correlation is significant at the 0.05 level (2-tailed).*			

The relationship between legal framework and effective environmental management was investigated using the Pearson product-moment correlation coefficient. There was a statistically significant moderate positive correlation between the two variables (r = .461; n = 68; p<.000), implying that international, national and local legal framework is positively associated with the effective wetland management in decentralized system of governance. This finding is complemented by responses from other informants who argued that legal frameworks provide the basis for decision-making, constitute guidelines for environmental protection and form the basis for monitoring, enforcement and compliance. However, in terms of enforcement, it emerged that the environmental laws are weak and poorly enforced. For example, one informant remarked:

> *The penalty provided for contravention of this legal provision is not deterrent enough as it provides for the imprisonment of a term not exceeding 3months or a fine of not more than shs3million Uganda shillings (1200USD). This is just not serious enough and unless such provisions are revised to be more strong, wetlands (and general environment) shall continue to be degraded*

Such a scenario points to a situation where local governments should be proactive enough to put in place punitive sanctions for environmental degradation to enable them reap the benefits

of environmental management. This is in line with Bracci and Maran's (2013) assertion that a pro-active environmental management regulation potentially attracts actual and prospective investors, sponsors, employees, consumers and local authorities.

Furthermore, the specific lack of wetland law in Uganda is another setback to effective enforcement of the wetland legislation. At the moment, all wetland legislation is scattered across various legal art pieces as confirmed by 57 percent of the respondents. This makes it difficult for some district officers to trace, let alone evoke, such provisions in ensuring effective and sustainable wetland management. According to the District Planner; *"Whereas there is a wetland policy in place, the lack of related law to enforce the said policy hampers the district's efforts to adequately address the silent issues related to wetland management."*

Concluding remarks

Results from the study suggest that funding has a positive relationship with the effective management of environmental resources in decentralized setting in Uganda. However, findings also reveal that the abolition of graduated tax that traditionally provided much needed funds to implement district programmes has greatly undermined decentralized units' capacity to manage the environment. The only source of funding now available for wetland management is the conditional grant from the central government. This largely affects local decision-making and compromises the equitable, effective and sustainable management of wetland resources in the districts. Human resource capacity as assessed in terms of staffing levels, skills and motivation was also found to have a significant positive relationship with the effective management of environmental management in a decentralized setting. Human resource capacity is a key determinant in environment management especially in terms of numbers of staff, competences and their motivation levels. More important is the ability of local governments to attract and retain key staff. On the legal framework, the results also indicate that, indeed, there is a significant positive relationship between the legal framework and effective wetland management in a decentralized setting. A well-defined legal framework with clear provisions of how to handle environmental issues forms the cornerstone for effective environment protection and management. Such a framework guides decision-making, promotes compliance and galvanizes enforcement mechanisms.

To promote sustainable environment management in a decentralized system of governance, there is a need for a paradigm shift among the district leadership, both technocrats and political leaders, to become active players and equal partners with central government as opposed to being recipients of pre-dictated funds that are not commensurate to the districts' needs and priorities. This calls for efficient planning and budgeting mechanism that addresses both specific short-term needs with clear linkage to overall Local Government goal and vision. The meagre resource allocation does not only hamper local decision-making based on local problems, but also makes the management of emerging challenges impossible since there are penalties to non-compliance. It is therefore prudent that the district leadership takes charge and ensures that the priority needs are respected and addressed by all stakeholders and funding agencies including central government. Further to that, district local governments should explore avenues of improving funding for natural resource management activities including payment for ecosystem service options to those using wetland resources such as taxation of

wetland products at local level and enrolment of donor support among other initiatives.

With regard to human resource capacity, the central and local governments should devise means of enhancing human resource performance to achieve the desired outputs in sustainable wetland management and environment at large. There should be a deliberate effort to recruit and retain the required personnel to handle day-to-day management of wetland resources, both at the district and lower local government levels, such as being implemented for agriculture, community development and health officers. Local governments should develop a comprehensive capacity building program where each staff is accorded equal opportunities to undergo further training in relevant fields in addition to support supervision to upgrade their competences in environmental management. There is a need to develop an incentive structure which includes, salaries and allowances and adequate facilitation of the environment and wetland sub sector in order to promote sustainable management of wetland resources in the country and specifically districts. Legally, efforts should be made at national level towards harmonizing relevant laws, revising obsolete laws that will go a long way in alleviating the existing problems related to enforcement and compliance. District local governments should also be proactive and scale up formulation of district ordinances and lower local council bye-laws that are community-driven and hence enforceable.

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