Summary

Uganda is currently experiencing rapid depletion of water resources, which, in addition to ecological challenges, is leading to conflicts in some parts of the country. The Ugandan government has taken action and formulated policies and policy regimes to regulate land use and impacts on the environment. Using both qualitative and quantitative research methods, this case study illustrates the discrepancy between policy formulation and the reality of implementation on the ground.

Background

Land and natural resource degradation in Uganda account for over 80% of the annual costs of environmental degradation. The severity of this environmental problem is compounded by the fact that the livelihoods of many Ugandans intimately depend on the environment, both as a source of subsistence and as a basis for production. Uganda, however, is rich in water resources: annual rainfall of 600–2500 mm is the principal contributor to the surface water bodies that cover considerable areas in the country. An estimated 200,000 springs are found in the country and water withdrawal in aquifers is estimated to be below 1% of total renewable water resources.

However, degradation of wetlands is contributing to environmental stress. For example, the hilly Jinja district has been noted as having one of the highest percentages of modified wetlands. Only in 1990-1992, 7.3% of the country’s wetlands were converted into farmland. Coupled with population growth and increasing per capita usage of water has already made the demand for water a problem. The freshwater demand level of the livestock population is projected to increase to 233 mil. m$^3$ by 2010. The rate at which water catchment areas are being depleted is growing at an exceedingly high speed. As a result, the majority of rivers, swamps, wetlands, and other catchment areas have already been depleted or encroached upon. There is a rapid depletion of water resources, and water scarcity is already leading to conflicts.

The Ugandan government has formulated a number of policies to regulate land use and impacts on the environment. These policy frameworks seek to integrate “environmental concerns in the socioeconomic development planning of the country”.

To date, the Ugandan government has developed a number of policy regimes to regulate and influence land use and environmental impacts. For example, the Poverty Eradication Action Plan (PEAP, 2000), the Sector Wide Approach to Planning for Water and Sanitation Sector (2002), the National Wetlands Policies (1995), the Environmental Impact Assessment Resolutions (1998), the National Environment Management Policy (MLWE 1994), the National Environment Statute (MLWE 1995), the Constitution of the Republic of Uganda (GoU 1995), and the current draft of the National Land and Land Use Policy, among others. The National Environmental Management Statute was also enacted, establishing the National Environmental Management Authority (NEMA) as well as providing for a broad range of issues pertaining to the functions of NEMA and measures for environmental protection including water resource management.

**Actions taken**

The aim of the study presented in this case study was to evaluate the effectiveness of government policies on restoration and conservation of watersheds. The following research questions were addressed in particular:

1. What is the state of water resources in 4 mountainous districts of Uganda?
2. What are the causes of water depletion, and what is the conflict potential of water scarcity?
3. How effective are existing policies in protecting and restoring water catchments?

Based on the findings, policy recommendations are provided for the new land policy currently being formulated in Uganda.

The study was carried out in 2006 in districts of Uganda: Mbarara, Ntungamo, Katakwi, and Kasese. They were chosen as a representative sample of districts found in the cattle corridor, where water crisis problems are rampant. The main areas of interest were water catchments (forests, wetlands, hills), water sources (rivers, lakes, streams), and water supply facilities (water gravity flow systems [GFS], boreholes, water pumping systems, protected water springs, shallow wells, and dams). In total, 16 rivers, 26 wetlands, 7 forests, 4 lakes, and 2 highlands were visited in the 4 districts.

The study focused on various interest groups and collected stakeholders’ and communities’ views and perceptions regarding the performance of land management systems and environmental policies. The study used both qualitative and quantitative approaches, relying on different research techniques such as purposive sampling, discussions with key stakeholders, questionnaires, direct observation, review of documents and photographic documentation. During all fieldwork and data analysis stages, office-based meetings with the research team were held to validate the quality of the data. Data from interviews and questionnaires were disaggregated according to sex, educational level, land ownership, and major economic activities related to water catchment systems. In addition, information about water catchment systems, forests, and encroachment on catchment areas was analyzed per district. Among the main issues covered in the questionnaires were land use, conversion of land cover, legal and political matters, corruption, and lack of awareness.

In each district, 50% of the water catchments and no less than 10% of each category of existing water facilities were randomly selected. These samples were deemed representative for an on-the-spot comprehensive picture of water facilities. For each of the sites visited, 4 respondents were interviewed; 2 respondents were community people and the other 2 were key respondents. The key informants in the community included local council leaders, religious leaders, opinion leaders, teachers, and extension workers at subcounty level (community gatekeepers). At the district level, the District Water Officer, the District Environmental Officer, the District Fisheries Officer, the District Agricultural Officer, and the District Forestry Officer were purposively selected as key respondents.
Outcomes

Using both qualitative and quantitative research methods, the study presented here focused on water resources, assessing their status in 4 mountainous districts of Uganda and evaluating the effectiveness of government policies with regard to restoration and conservation of water catchments.

The study revealed a glaring gap between the existence of laws and policies on the one hand, and the reality of implementation on the ground on the other—there is rapid depletion of water resources, and water scarcity has already led to conflicts. The paper calls for effective implementation of existing policies and laws without fear or favor and for increased budgetary allocations from the current 25.6 billion shillings (2006–2007) to 34.45 billion or more, to accommodate funding for the execution of policies and laws. It also calls for meticulous review of the existing environmental policy regime with a view to tailoring, customizing, and localizing it for practical purposes.

This study shows that, despite the fact that Uganda has a number of laws and policies geared toward conserving the environment, natural resources—in particular water catchments—continue to be encroached upon. The rate at which water catchment areas are being depleted is growing at an exceedingly high speed, and, as a result, the majority of rivers, swamps, wetlands, and other catchment areas have either already been depleted or encroached upon. Despite the fact that the government owns over 80% of water catchments in the districts selected for this study, it is not acting upon encroachments. For Uganda, environmental conservation is no longer just a matter of scenic beauty but a question of economic survival for both households and nation.

Lessons Learned

The alarming rate at which natural resources are being depleted shows that these laws and policies are not enforced effectively.

Considering the high number of forests and wetlands that have been depleted in the recent past, the government of Uganda should come up with a policy specifically focusing on restoring these forests and wetlands.

The major causes of no functionality included mechanical breakdown of the water facilities, poor design and workmanship, low water table as a result of depletion of natural catchments, and limited community participation in maintenance of public water work.

The study in the 4 districts here has shown that there is an acute shortage of human and financial resources at the district and community levels.

Those who encroach on the environment and water catchment systems by virtue of their political influence or connections should be exposed and legal action taken against them.

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