

Governance and Natural Resource Utilization: Challenges, Gaps and Opportunities

Introduction

Environment is a vital component for sustainability of livelihood and national development. Uganda's stock of natural resources and the environment (ENR) has potential of providing a long-term supply of goods and services and is thus an important part of the country's asset base. This asset base underpins and determines the speed and magnitude of economic growth and development. As such it is a major source of livelihoods for the people (FAO, 2014).¹

The biggest concern of most environmentalists is the ability of economic systems to continue growing without undermining the natural systems which are the ultimate foundation of human life. This points to the issue of sustainability that has been of major global concern. Different scholars have come up with desirable characteristics of sustainable growth and development which include; non-declining well-being, natural capital base and production possibilities for future generations; exploitation of ENR within the limit of their sustainable yields; maintaining minimum conditions for ecosystem resilience through time and the consensus building and institutional development (Perman et al, 2011)². The following attributes are stressed as key sustainable livelihood goals: Improved local food; security, nutrition and health; increased sources and levels of income; resilience to stresses and shocks; improved household and community well-being; and the sustainable management of natural resources.

However, the ever-increasing pressure on these resources resulting mainly from population growth, affluence, poor planning and policy failure, the state of many of the global commons is worrying. The repercussions from the deteriorating state of ENR have been evidenced in depletion and extinction of species, ecosystem destruction, pollution and climate change. The losses in wellbeing resulting from these events have been enormous.³ Scientists proposing methods of curbing on the rate of degradation have noted that in many cases the damage emerging from ENR degradation is costly and in certain instances irreversible. This is particularly true for biodiversity loss and destruction of the ecosystem.

Uganda is blessed with different and unique types of Environment and Natural Resources which provides potential for achieving economic progress if these resources are well managed. Uganda's main economic activity – agriculture heavily relies on environment and thus environmental friendly agricultural practices need to be embraced. It will be noted that the agricultural sector employs about 72 percent of the total population (UBOS 2014)⁴. This sector is mainly dependent on the natural bio-physical and agro-ecological conditions across the country which supports different agricultural practices and systems. Furthermore, the sector has potential to spur economic development if modern farming practices, social and environmental concerns are integrated and implemented in policies, plans, projects and programmes.

¹FAO (2014). State of World Fisheries and Aquaculture 2014. Food and Agriculture Organization of the United Nations (FAO), Rome.

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³NEMA (2016). State of the Environment Report for Uganda 2014. National Environment Management Authority (NEMA), Kampala.

⁴UBOS (2014). National Housing and Population Census 2014. Uganda Bureau of Statistics (UBOS), Kampala.

Developments have been established to boost the tourism potential of Uganda, these tourist attractions are both as a result of manmade efforts and the God given attributes that make Uganda Unique, and a country, “Gifted by Nature”. These include academic institutions, monuments, urban areas, transport infrastructure, hospitality institutions including hotels and tourist lodges. Rain forest, National Parks, Bird species, Wildlife including mountain Guerrillas, fresh water lakes, rivers and the diverse ecosystem make part of the natural Uganda.

Biodiversity is therefore a key contributor to the economy through tourism, income and wealth creation, through payment for ecosystems services (PES) and carbon credits. However, biodiversity is threatened by habitat loss, degradation or fragmentation, unsustainable harvesting and over-exploitation of living and non-living resources, invasion by alien species, pollution or contamination as well as issues of environmental management of mining and oil and gas development.

Similarly, Uganda is endowed with minerals such as sand, clay, gold, oil, gas and uranium. An environmental tax levied on extraction of these minerals can be applied to restore degraded areas and enhance natural resource base. Also, Uganda is one of the countries with the highest levels of biodiversity at genetic, species and ecosystem levels. Investments geared at conservation and enhancing of biodiversity will attract positive collaborations not only at national but also at regional and international levels.

Uganda’s fisheries resources are not only diverse in aquatic ecosystems but also in fish species biodiversity. Fisheries activities are mainly carried out in open water sources and provide an important source of livelihood for about 1.5m people in Uganda. The fisheries sub sector however; faces a challenge of open accessibility into fisheries leading to indiscriminate over fishing thus leading to declining fish stocks.

The finite nature of land has been subjected to population pressure, coupled with inappropriate technologies employed to manage soil and water conservation, waste management and other environmental problems. Areas like forest and wetlands are being opened up for settlement and farming to increase cultivated land area.

Evidence shows that global warming and climate change are a function of anthropogenic factors with the main drivers of climate change in Uganda being contributed by global carbon emissions but also locally emanating from land use change, unsustainable agricultural practices, population increase, and burning of fossil fuels including oil and gas. The impacts include changes in the rainfall patterns, prolonged drought, and emergence of diseases like malaria in areas that were previously mosquito free, loss of soil fertility from heavy rains, increasing frequency of floods and high temperatures which provide a fertile growth environment for pests and diseases.

Increasingly, deterioration in water quality and quantity as well as degradation of watersheds is becoming a major issue for water resources management in the country. The major drivers of reduced water quality and quantity are encroachment on water catchments, increased water abstraction for domestic, industrial, infrastructure development and production, discharge of effluent into the environment and inadequate sanitation facilities especially among fishing communities.

The Oil and Gas sector is Uganda's newest development prospect and also the newest threat to the environment if not properly managed. It presents some environmental concerns including ecological disturbance and biodiversity loss emanating from impacts on wildlife population and movement; sensitive aquatic resources such as deltas and shorelines; degradation of sites with international conservation status such as Ramsar sites; pollution and disappearance of endemic species; overfishing and water contamination; and habitat fragmentation due to construction works.

Similarly, about 92 percent of Uganda's energy needs are met from woody biomass (NEMA 2014)⁵. Fuel wood currently contributes more than 96 percent of energy for cooking in Uganda. Charcoal burning involves the irreversible thermochemical decomposition of organic material, especially wood at elevated temperatures in a very limited supply of oxygen (Cuna and others, 2010)⁶.

Indiscriminate cutting of trees for commercial wood fuel (firewood and charcoal) has contributed to the reduction of the total area covered by natural forests and woodlands. Most of the rural biomass sources on private and communal land have already been depleted to fulfil the needs of the increasing population. Biomass is the dominant energy resource for households as well as for small- and medium-scale industries such as lime, brick, and tile making and a number of agro-based industries in Uganda. Woody biomass meets 92 percent of the country's energy needs (NEMA, 2014).

A major gap exists in establishing frameworks to reduce high taxes on alternative but affordable energy sources like solar and cooking gas. Taxes on charcoal are inconsistent, not regularized, and determined by the district local governments. They are categorized as levies for transporting charcoal from one district to another and not taxes on charcoal per se. They are relatively low compared to taxes on other energy sources. The current common levies range between Ug.sh 1,000–1,500 per 100 kilogram of charcoal compared to Ug.sh 100,000 of the equivalent of cooking gas.

There is also a growing concern in Uganda about the ever-shrinking forest cover. Estimates indicate that 7,000 ha of protected forests are destroyed every year for timber and charcoal while 73,000 ha of forests on private land are cleared annually (IRIN, 2012)⁷. Forests in central Uganda and those near urban centres suffer the greatest pressure because charcoal consumption is much higher in the urban areas, especially Kampala.

Uganda's approach to controlling charcoal use is through increasing access to alternative energy sources. Vision 2040 commits to expand and promote a countrywide rural electrification program and alternative energy sources such as solar, liquefied natural gas and biogas. The Uganda Vision 2040 target is to increase access to electricity from 11 to 80 percent between 2010 and 2040 (NPA, 2013)⁸. However, there are limited frameworks to reduce high taxes on alternative but affordable energy sources and thus reduce

⁵NEMA (2014). Fifth National Report to the Convention on Biological Diversity. National Environment Management Authority (NEMA), Kampala.

⁶Cuna, S. A., Tancredi, N., Pinheiro, P. and Y.M. Irene (2010). Thermal Analysis of the Combustion of Charcoals from Eucalyptus obtained at different pyrolysis temperatures. *Thermal Analysis and Calorimetry*. 100:3, pp 1051-1054.

⁷IRIN (2012). Charcoal Burning. Available at www.irinnews.org/Report/94810/UGANDA Charcoalboom-a-bust-for-forests, accessed on 25/09/2015

⁸ NPA (2013). Uganda Vision 2040. National Planning Authority (NPA).

pressure on natural resources for fuel. The available hydro-electricity is expensive and is largely used for household lighting and not cooking.

The above environmental challenges are escalated by lack of data and information on environment and natural resources in Uganda. Implementing a regular monitoring and assessment programme for environment and natural resources is an expensive venture. However; the activities are also limited due to an absence of appropriate data collection and monitoring systems and the limited planning initiatives for data collection. As a result complete data sets on the status of these resources are missing.

It is difficult to comprehensively assess both the qualitative and quantitative changes, and the current status of the ENR resources. However, according UBOS (2014), the composition of land area estimates was last updated from the Remote Sensing Survey carried out in 2010. It indicated that agricultural land occupies the largest proportion of land cover area (38 percent), followed by grassland (22 percent) and then water (15 percent).

The above discussion therefore points to the fact that the growing population and desires for affluence combined with inadequate planning, policy failures put pressures on the environment and result in environmental degradation. Evidence of environmental deterioration is already present – ecosystem destruction, species decline and extinctions, pollution and climate change, to name a few. These losses also impact on human wellbeing. The needs of the population and the country must be met and therefore this calls for environmental managers to employ innovative management approaches to ensure that the environment continues to support human development and wellbeing into the future. At the same time, the role and importance of the environment as infrastructure for sustainable development can be enhanced by bolstering productivity in the major production sectors including agriculture, fisheries, forestry and mining to provide opportunities for employment, wealth creation, food security, a healthy society, and foreign exchange earnings.

Although government has made progress in environmental laws, implementation remains a challenge. Population trends affects environmental management through the availability and renewability of natural resources. A vast majority of Uganda's population is dependent on natural resources. For example the decline in forest cover at 1.8 percent per annum (between 1990 and 2005) is attributed to the increasing demand of land for agriculture and fuel wood by the rapidly increasing population growth (UBOS, 2015)⁹. The high rate of population growth also increases poverty levels and threatens opportunities for wealth creation by negatively affecting future gains in agricultural production and food security.

Implementation of Uganda's policy and regulatory framework covering forests is weak. This is primarily due to lack of resources. Budgetary allocations for natural resources agencies are insufficient to implement their mandates (MFPED, 2013).¹⁰ Most agencies involved in natural resources management are understaffed, and poorly facilitated. For example, limited staff capacity to effectively patrol all the Central Forest Reserves (CFRs) is a challenge that NFA has grappled with over time.

⁹UBOS (2015). Statistical Abstract 2015. Uganda Bureau of Statistics (UBOS), Kampala.

¹⁰MFPED (2013). Millennium Development Goals Report for Uganda, 2013. Drivers of MDG Progress in Uganda and the Implications for the Post-2015 Development Agenda. Ministry of Finance, Planning and Economic Development (MFPED), Kampala.

In addition to limited resources, overlapping and conflicting mandates of MDAs involved in forest management. For example, forest resources are managed by agencies anchored in different ministries and results in poor coordination and discourages collaboration. About 15 percent of the forests are under UWA, whose mandate is different from NFA's. UWA and NFA are anchored in different ministries, yet they manage relatively similar forests. This results in duplication of roles between UWA and NFA, especially in CFRs that are managed for biodiversity conservation. Dealers in forest produce take advantage of the poor coordination among the responsible agencies to illegally exploit the resource.

Some government policies outside the conservation sector affect forests and other natural ecosystems. Uganda has a very ambitious infrastructure development plan in its quest to become a middle-income country by 2040. The theme for the budget speech 2014/2015 was, 'maintaining the Momentum: Infrastructure for Growth and Socio-Economic Transformation.' The processes for implementing these projects will need large expanses of land, which will likely lead to destruction of natural ecosystems including forests.