

UGANDA'S ENVIRONMENT AND NATURAL RESOURCES: ENHANCING PARLIAMENT'S OVERSIGHT





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- International borders
- Main roads
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0 50 100 km
Based on UN national map

INTRODUCTION

Uganda's natural resource base is one of the richest and most diverse in Africa¹, resulting in the country's economy relying heavily on goods and services so provided.² For example, estimates show that gross returns to the national economy from biodiversity alone can be as high as US\$ 63.9 billion per year.³ As such environmental resources, if used properly, can contribute significantly to Uganda's national economic development.

As part of efforts to ensure effective management of Uganda's environment and natural resources, several policies and institutions have been put in place. Despite these efforts the country's natural resources continue to be degraded, and this jeopardises both individual livelihoods and the country's economic development.

People's livelihoods in Uganda are inextricably linked to sound natural resource management. It is therefore essential that Parliament, in its oversight and legislative role, ensures that natural resource management is at the centre of good governance and economic development.

PURPOSE OF THE HANDBOOK

A series of studies indicate that the level of environmental degradation being witnessed are a result of increased population pressure and ineffective management of Uganda's natural resources. There is lack of commitment to fund management of the natural resources as illustrated by the decrease of government and partner investment in this sector. For example, national budgetary allocations to the environment and natural resources declined from 4.9 percent in 2004/2005 to 2.4 percent in 2008/2009.

The reduced funding for the environment and natural resource sector is happening at a time when sustainability, as a concept, is becoming a basic tenet of development. This implies that underestimating the immense contribution of the environment and natural resources to the economy of Uganda is tantamount to creating conditions for destroying the foundation upon which the same economy is based.

Accordingly, the purpose of this handbook is to provide a ready source of environmental information and trends for legislators to reference on a regular basis in the course of their work. It is also meant to foster effective appreciation and representation of environmental issues in parliament, while entrenching the concept of sustainable development in planning and decision-making at different levels.

HOW TO USE THE HANDBOOK

This handbook is organised according to various environment and natural resource focus areas in Uganda. Within each of these focus areas is a brief statement of current status, prevailing institutional, policy and legal framework, points for legislators to consider action on, and useful contacts for legislators to consider. The twelve focus areas addressed in this handbook are: agriculture, climate change, energy, fisheries, forests, land, oil and gas, pollution, tourism, water, wetlands and wildlife/biodiversity.

The handbook also summarises all key environmental laws, policies and strategies for ease of reference to legislators.

the 1990s, the number of people with a diagnosis of schizophrenia has increased in many countries (1).

There is a growing awareness of the need to improve the quality of life of people with schizophrenia, and to reduce the stigma associated with the illness. This has led to a focus on the development of self-help and recovery-oriented approaches to mental health care (2).

One of the key areas of research in this field is the development of self-help materials that can be used by people with schizophrenia to manage their illness and improve their quality of life (3).

One of the most widely used self-help materials is the *Self-Help Guide to Schizophrenia* (4).

This guide provides information on the symptoms of schizophrenia, the causes of the illness, and the available treatments (5).

It also provides practical advice on how to manage the illness, and how to improve one's quality of life (6).

The guide is written in a clear and accessible style, and is suitable for use by people with a range of literacy skills (7).

It is available in both print and electronic formats, and is widely available in libraries and community centres (8).

The guide has been widely evaluated, and has been found to be effective in helping people with schizophrenia to manage their illness and improve their quality of life (9).

It is a valuable resource for people with schizophrenia, and for their families and carers (10).

Further research is needed to evaluate the effectiveness of self-help materials in helping people with schizophrenia to manage their illness and improve their quality of life (11).

It is important to continue to develop and evaluate self-help materials that can be used by people with schizophrenia to manage their illness and improve their quality of life (12).

This paper describes the development of a self-help guide for people with schizophrenia, and the results of an evaluation of the guide (13).

The guide was developed by a team of mental health professionals, including a psychiatrist, a psychologist, and a social worker (14).

The guide was developed using a participatory approach, in which people with schizophrenia were involved in the development of the guide (15).

The guide was developed in a series of stages, starting with a consultation with people with schizophrenia to identify their needs and interests (16).

The next stage was to develop a draft guide, which was then reviewed and revised by people with schizophrenia (17).

The final stage was to produce the final guide, which was then distributed to people with schizophrenia (18).

The guide was evaluated using a range of methods, including a focus group discussion, a questionnaire survey, and a series of interviews (19).

The results of the evaluation showed that the guide was well received by people with schizophrenia, and was found to be helpful in helping them to manage their illness and improve their quality of life (20).

The guide was found to be easy to read and understand, and was found to be relevant to the needs and interests of people with schizophrenia (21).

The guide was found to be a valuable resource for people with schizophrenia, and for their families and carers (22).

Further research is needed to evaluate the effectiveness of self-help materials in helping people with schizophrenia to manage their illness and improve their quality of life (23).

It is important to continue to develop and evaluate self-help materials that can be used by people with schizophrenia to manage their illness and improve their quality of life (24).

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AGRICULTURE

Agriculture is a major contributor to Uganda's economy. It accounts for approximately 75 percent of the total labour force, 25 percent of Gross Domestic Product (GDP) and 50 percent of total exports. Women provide over half of agricultural labour, focusing mainly on food rather than cash crop production. Approximately 70 percent of agricultural production is for subsistence purposes.

Uganda's agriculture faces several challenges, which impede the sector from realising its full potential contribution to the national economy. Loss in soil productivity results in income loss to farmers in the range of Uganda USD 39 to 56 per hectare per year.⁴ Growing population pressure on natural resources and traditional farming methods exert tremendous pressure on agricultural productivity through their effects on deforestation, wetland degradation, soil erosion, and water and land pollution.⁵ In addition, failure to prioritise the agricultural sector in national and local planning and resource allocation causes the decline in agricultural productivity.

INSTITUTIONAL FRAMEWORK

- Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)
- Ministry of Lands, Housing and Urban Development (MLHUD)
- National Agricultural Research Organization (NARO)
- National Agricultural Advisory Services (NAADS)
- District Land Board
- District Production Department

POLICY AND LEGAL FRAMEWORK

- Uganda Food and Nutrition Policy, 2003
- Plan for Modernization of Agriculture
- National Agriculture Advisory Services
- National Land Use Policy, 2008
- Constitution of the Republic of Uganda, 1995
- Budget Act, 2001
- Land Act, Cap 227
- National Environment Act, Cap 153
- Agricultural and Livestock Development Fund Act, Cap 233
- Agriculture Seeds and Plants Act, Cap 28
- Uganda National Council for Science and Technology Act, Cap 209
- Animal Breeding Act, 2001
- Control of Agricultural Chemicals Act, Cap 29
- Food and Drugs Act, Cap 278
- Land Acquisition Act, Cap 226
- Local Government Act, Cap 243

- Markets Act, Cap 94
- Plant Protection Act, Cap 31
- Investment Code Act, Cap 92
- National Agricultural Research Act, 2005

ACTION POINTS FOR LEGISLATORS

- Prioritisation of agriculture in national planning, decision making processes and budget allocations.
- Greater and more modern investment in the agricultural sector.
- Improved access to markets, especially external markets, for food and cash crops and the livestock sectors.
- Negative impacts of climate change on agricultural productivity.

USEFUL CONTACTS

- National Agricultural Advisory Services
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- Food and Agriculture Organization
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- Uganda National Council for Science and Technology (UNCST)
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CLIMATE CHANGE

Uganda has a typically tropical climate with little variation in temperature throughout the year. Distinctive wet and dry seasons characterise the annual climate for most of the country, except in the semi-arid north east.⁶ However, the country is vulnerable to climate change, a phenomenon that is growing in importance globally. There is scientific consensus that accelerated global climatic change is attributable to human activities.⁷ Impacts resulting from climate change include alteration of weather patterns and increased frequency of extreme weather, alteration of rainfall leading to increased risk of droughts and floods, and disturbing effects on the stability of ecosystems leading to increased likelihood of species migration and species extinctions, as well as negative impacts on food security.

Climate change in Uganda threatens to frustrate poverty eradication programmes and the achievement of the Millennium Development Goals. Climate change may undo decades of development efforts through destruction of infrastructure, property and lives. Climate change in Uganda will continue to increase the frequency and intensity of extreme weather events such as droughts, floods, landslides and heat waves.

INSTITUTIONAL FRAMEWORK

- Ministry of Disaster Preparedness and Management under the Office of the Prime Minister
- Department of Meteorology

POLICY AND LEGAL FRAMEWORK

- National Adaptation Programme of Action (NAPA)

ACTION POINTS FOR LEGISLATORS

- A weather and climate policy is required to guide a national response to climate change.
- Immediate action is required to address how climate change in Uganda is contributing to unreliable and declining agricultural production.
- The Parliamentary Forum on Climate Change has been formed. It is important that the Forum raises awareness amongst legislators about climate change in Uganda.
- NAPA has been formulated to guide corrective actions that will be implemented both for adaptation to and mitigation against the effects of climate change. NAPA requires greater funding and mainstreaming into key economic sectors such as agriculture.

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- International Union for Conservation of Nature (IUCN)
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Plot 39, Babiha Avenue
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- The Environmental Conservation Trust of Uganda
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ENERGY

The energy sector plays a central role in Uganda's economy. It is the engine for economic growth and development, and a vital input into all the productive and social sectors of the economy.

The major sources of energy in Uganda are biomass, petroleum and hydro-electricity. These provide approximately 96.5 percent, 1.5 percent and two percent, respectively⁸ of the total energy consumed in the country. Other renewable sources of energy contribute negligibly to the national energy balance. The level of electrification in the country is very low, with only about five percent of the entire population connected to national grid. In the rural areas, where more than 85 percent of the population live, only about one percent of the households are connected to the national power grid, and a few others get part of their energy needs through household generators, batteries and solar photovoltaic (PV).⁹

In terms of natural resources endowment, the country is blessed with a variety of energy resources. These include abundant biomass and water resources, ideal solar conditions, peat, geo-

thermal, wind and large quantities of non-woody biomass. Except use of traditional biomass whose contribution is already enormous, the remaining energy potential remains untapped.

Despite Uganda's vast hydro-power potential estimated at 3000 MW, less than 10 percent of this potential is exploited.¹⁰ The net result has been pressure on the natural resource base, mainly forests, leading to degradation and deforestation.

INSTITUTIONAL FRAMEWORK

- Ministry of Energy and Mineral Development (MEMD)
- National Environment Management Authority (NEMA)
- National Forestry Authority (NFA)

POLICY AND LEGAL FRAMEWORK

- Energy Policy, 2002
- Constitution of the Republic of Uganda, 1995
- Electricity Act, 1999

ACTION POINTS FOR LEGISLATORS

- How should Uganda meet the energy demands of a growing economy on a sustainable and efficient basis and improve the living standards of its people?
- How can Uganda develop its considerable hydro-electric potential and increase the biomass resource base vital for its fuelwood consumption?
- Energy development and environmental damage are intricately related. The energy sector has greater environmental impacts than most other economic sectors.¹¹ How can Uganda ensure that the environmental concerns of energy development are adequately addressed?

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FISHERIES

The fisheries sector is the second highest foreign exchange earner for Uganda. Investment in the sector is estimated at US\$ 200 million with employment levels of over 700,000 people.¹² In 2008, 24,965 tonnes of fish were exported and this earned Uganda an estimated \$124 million in export revenues.¹³

With improved market prices for fish, government intervention for increased production and stagnating supply from capture fisheries, aquaculture has begun to attract entrepreneurial farmers seeking to exploit the business opportunity provided by the prevailing demand for fish. The recent expansion in aquaculture has also resulted in the transformation of 20 to 30 percent of the smallholder subsistence ponds into profitable small-scale production units through developments in management as well as scale of production.

There is a looming crisis of dwindling fish stocks, mainly emanating from increased pressure on wild stocks worsened by the fast growing regional and international markets.

The value of fish in Uganda is falling. The fisheries sector contributed over US\$ 117 million in export revenue in 2007, down from US\$ 142.69 million the previous year.

Uganda's most important fisheries are capture fisheries, which cover about 20 percent of the country's surface area and comprise five major lakes (Victoria, Kyoga, Albert, Edward and George).

INSTITUTIONAL FRAMEWORK

- Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)
- National Environment Management Authority (NEMA)

POLICY AND LEGAL FRAMEWORK

- National Fisheries Policy, 2003
- Fish Act, 1964
- Draft Fisheries Act, 2004

ACTION POINTS FOR LEGISLATORS

- Uganda needs to address the increasing fishing pressure and consequent reduction in the country's total fish production from 434,000 tonnes in 2004 to 374,000 tonnes in 2007.¹⁴ The increasing population in fishing areas is causing a situation where too many people are chasing too few fish leading to over-fishing.¹⁵
- Fisher folk resort to illicit activities to compensate for the losses in fish capture by using illegal nets.¹⁶ This calls for an urgent need to control human activities for purposes of ensuring a steady fisheries resource base and constant in flow of foreign exchange.
- The fisheries sector also lacks an appropriate institutional framework and is lumped within the Ministry of Agriculture, Animal Industry and Fisheries, which handles typical farming systems. Yet new challenges like climate

change will continue to make fisheries management increasingly complicated.

- There is a need to develop enabling policies, strategies and plans to exploit the potential of aquaculture as a viable alternative to boost fish production and relieve the pressure on Uganda's lakes.

USEFUL CONTACTS

- Ministry of Agriculture, Animal Industry & Fisheries
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- Uganda Fisheries & Fish Conservation Association (UFFCA)
Old Kiira Road Plot No.1508, Block 213
Opposite Kadic Hospital, Kampala
Tel: +256 772-474228, 712497960

FORESTS

Forestry makes a crucial contribution to the ecology and energy needs of Uganda. Uganda's forest resources are an essential foundation for the country's current and future livelihood and growth. The overwhelming majority of Uganda's household energy requirement is generated by forests. Forestry resources contribute six percent of GDP, and the sector employs 100,000 people directly and another 750,000 indirectly.¹⁷ Forestry supports wildlife and other forms of biodiversity vital for the country's future heritage, as well as for generating foreign exchange through tourism. As such Uganda's forests and woodlands are central to the three pillars of sustainable development – economy, society, and environment.

There are 698 gazetted forest reserves in Uganda, and these constitute both local and central forest reserves. The National Forestry Authority (NFA) manages central forest reserves, the Uganda Wildlife Authority (UWA) manages forests in national parks and wildlife reserves, while local forest reserves fall under the mandate of local governments (District Forestry Services).

Uganda lost 27 percent (1,329,570 hectares in total or 88,638 hectares per year) of its original forest cover between 1990 and 2005.¹⁸ At this rate, forest resources are likely to be exhausted by 2050.¹⁹ Government efforts to increase forest cover through a Public-Private Partnership approach over the last decade have resulted in greater investment in forestry (mainly in the forest reserves than on private land). Although private financing in forestry is increasing (USD 50 million between 2002-2009),²⁰ donor financing generally plays a crucial catalytic role in forestry investment.

INSTITUTIONAL FRAMEWORK

- National Forestry Authority (NFA)
- Uganda Wildlife Authority (UWA)
- District Forestry Services (DFS)
- National Environment Management Authority (NEMA)
- Ministry of Water and Environment (MoWE)

POLICY AND LEGAL FRAMEWORK

- Forestry Policy, 2001
- National Environment Management Policy, 1994
- National Environment Act, Cap 153
- National Forestry and Tree Planting Act, 2003
- Uganda Wildlife Act, Cap 200

ACTION POINTS FOR LEGISLATORS

- The National Forestry Authority and District Forestry Services require technical independence devoid of political interference as is currently the case.
- Government should demonstrate its commitment to forestry on private land and in forest reserves in terms of financing and establishing an effective institutional framework.
- The role and contribution of local communities to forest degradation needs to be carefully addressed, ultimately leading to their greater involvement in forestry on private and communal land and in forest reserves.
- Government holds forest reserves in trust for the benefit of all Ugandans. As part of its oversight role, the Legisla-

- ture should ensure that government respects the public trust doctrine in forestry resources management.
- Market weaknesses including inappropriate royalties, poor market information, trade restrictions and hidden subsidies that distort the markets for forest products require the intervention of the Legislature.
 - The reliance of Ugandans on forests for household energy requirements needs to be urgently addressed by encouraging alternative and sustainable sources of energy.

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LAND

The Constitution of the Republic of Uganda (1995) defines four systems of land tenure for the country – freehold, leasehold, mailo,²¹ and customary. Land in Uganda is the most essential pillar of human livelihood and national development.²² It is a critical foundation for many livelihoods due to its contribution to agriculture and the national economy.

However, massive land use changes without requisite land management planning pose significant socioeconomic and environmental threats. Land degradation is highlighted as the greatest contributor to the annual cost of environmental degradation, largely manifested in soil nutrient loss through soil erosion.²³ Scientific studies indicate that Uganda loses about 11 percent of its Gross National Income per annum as a result of excessive soil erosion alone.²⁴

INSTITUTIONAL FRAMEWORK

- Ministry of Lands, Housing and Urban Development
- District Land Board

POLICY AND LEGAL FRAMEWORK

- Land Policy (draft)
- Soils Policy (draft)
- Urban Planning Policy (draft)
- Land Use Policy, 2008
- Land Act, 1998

ACTION POINTS FOR LEGISLATORS

- The Land Act fails to clearly address overlapping land rights. This has caused widespread land conflicts in rural and urban areas.
- Insecurity of tenure based on gender is a major source of conflict.
- Communal land rights have become increasingly challenged as a result of oil and gas exploration on communal land. Customary land tenure requires greater security as a large number of Ugandans depend on it for their daily lives.

USEFUL CONTACTS

- Ministry of Lands, Housing & Urban Development
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- Uganda Land Alliance
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- Advocates Coalition for Development and Environment
Plot 96 Kanjokya Street, Kamwokya
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OIL AND GAS

There are five potential hydrocarbon exploration areas in Uganda:

1. Hoima Basin
2. L. Kyoga Basin
3. L. Wamala Basin
4. Kadam-Moroto Basin
5. The Albertine Graben

Exploration in the Albertine Graben has revealed large amounts of petroleum. A total of 37 exploration wells out of 39 have revealed commercial quantities of oil and gas. Estimated petroleum reserves in Albertine Graben exceed 2 billion barrels; enough to produce 100,000 barrels of oil per day in Uganda for 20 years.²⁵

INSTITUTIONAL FRAMEWORK

- Petroleum Exploration and Production Department (Ministry of Energy and Mineral Development)
- Electricity Regulatory Authority
- National Environment Management Authority
- Uganda Wildlife Authority

POLICY AND LEGAL FRAMEWORK

- Oil and Gas Policy, 2008
- Energy Policy, 2002
- Petroleum (Exploration and Production) (Conduct of Exploration Operations) Regulations, 1993

ACTION POINTS FOR LEGISLATORS

- Access to information, particularly the production sharing agreements between Government and the oil companies, is still heavily restricted and controlled. This will negatively impact on the transparency and accountability of petroleum exploration and production.
- The areas in which oil deposits have been confirmed are of crucial biodiversity value. Most of these are wildlife reserves, national parks, World Heritage sites and Ramsar sites.²⁶ The ecological and tourism value of these resources should be maintained as they will continue to be useful to national economic development long after petroleum reserves have been exhausted.

- The extraction of petroleum resources today precludes their availability to future generations. This ‘user cost’ is critical to the design of both the resource extraction path and the utilisation of proceeds from oil and gas sales.²⁷ It is important for the Legislature to be part and parcel of the process that determines the resource extraction path and utilisation of proceeds.
- Communities adjacent to exploration and production sites are predominantly engaged in agriculture, fisheries and related activities that are sensitive to effects of oil and gas activities, such as pollution. The livelihoods of these communities needs to be protected against the negative impacts of petroleum development in Uganda.

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- Uganda Wildlife Society
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POLLUTION

With one of the highest population growth rates in the world (above three percent per year), terrestrial, aquatic and atmospheric pollution in Uganda is on the increase. The growing urban population is witnessing increased air, water and land pollution as a result of vehicle and industrial emissions; sewage and waste management systems that cannot cope with growing demand; and energy needs that largely rely on fuelwood.

Rural populations are also growing and exerting increasing pressure on limited land. This has led to soil erosion, water pollution and siltation, and air pollution as a result of land clearing through burning.

Inadequate or weak enforcement of wastewater management standards has also resulted in significant industrial pollution in and around industrial areas on the shores of Lake Victoria, particularly around Kampala and Jinja.

The introduction of polythene bags has significantly increased terrestrial and water pollution, particularly in urban areas. Incongruent implementation of policy guidelines on polythene bags at various levels of government has led to a failure to control polythene-derived pollution.

INSTITUTIONAL FRAMEWORK

- National Environment Management Authority
- Ministry of Water and Environment
- Urban City/Town Councils
- Directorate of Water Development

POLICY AND LEGAL FRAMEWORK

- National Environment Management Policy, 1997
- National Environment Act, 1995
- National Environment Regulations, 2003
- Environmental Standards and Preliminary Environmental Impact Assessment for Water Quality and Discharge of Effluent into Water and Land in Uganda, 1998

ACTION POINTS FOR LEGISLATORS

- Strengthen the policy, legal and institutional framework for managing air, water and land pollution by creating standards and the ability of government agencies to competently enforce them. Some of these standards include those for municipal landfills, vehicle emissions, and industrial air and water pollution.
- Develop alternative and affordable sources of energy such as solar, small-scale hydropower, geothermal and others so as to reduce urban and rural reliance on fuelwood.
- Ensure greater protection to wetlands that provide affordable and natural treatment of wastewater entering Lake Victoria and other important water bodies.

- Encourage and enforce investment in wastewater treatment plants to control municipal and industrial waste.
- Encourage and enforce investment in recycling plants for polythene, glass and biodegradable waste.

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TOURISM

Tourism is one of the fastest growing sectors in the world economy and according to the World Travel and Tourism Council (WTTC), it was projected to grow to US\$8 000 billion worth of economic activity and create 328 million jobs globally by 2010. Tourism in Uganda is one of the primary sources of foreign exchange, high-end employment and investment.

Tourism has the ability to contribute to development which is economically, ecologically and socially sustainable, because it:

- has less impact on natural resources and the environment than most other industries;
- is based on enjoyment and appreciation of local culture, built heritage, and natural environment, and as such the industry has a direct and powerful motivation to protect these assets;
- can play a positive part in increasing consumer commitment to sustainable development principles through its unparalleled consumer distribution channels; and,
- provides an economic incentive to conserve natural environments and habitats, which might

otherwise be allocated to more environmentally damaging land uses, thereby, helping to maintain biodiversity.

Tourism in Uganda is largely dependent on the country's biodiversity, which is increasingly being relegated to the protected area estate (Bwindi Impenetrable National Park, Murchison Falls National Park, Queen Elizabeth National Park, etc). Unfortunately, protected areas in Uganda are experiencing increasing pressure from burgeoning adjacent populations that experience limited benefits and increasing costs as a result of their proximity to wildlife, politically and economically-motivated degazettement, and limited government investment in their management and development of products and services.

INSTITUTIONAL FRAMEWORK

- Ministry of Tourism, Trade and Industry
- Uganda Wildlife Education Centre
- Uganda Wildlife Authority
- National Forestry Authority
- National Environment Management Authority
- Uganda Tourism Board

POLICY AND LEGAL FRAMEWORK

- Uganda Wildlife Policy, 1999
- Uganda Tourism Policy, 2003
- Wildlife Act, 2003
- National Environment Act, 1995
- National Environment Regulations, 2003
- Hotel and Tourism Training Institute Act, 1994

ACTION POINTS FOR LEGISLATORS

- Develop strategies to increase community benefits from tourism.
- Greater facilitation of private sector investment in tourism development.
- Greater facilitation of the Uganda Wildlife Authority to manage and develop tourist attractions in protected areas.
- Increase and improve the capacity of the Uganda Tourism Board to market Uganda's tourism potential.

- Defend current protected areas against degazettement and gazette new potential tourist attractions.
- Develop and update tourism legislation in Uganda.

USEFUL CONTACTS

- Ministry of Tourism Trade and Industry
P.O.Box 7103 Kampala
Tel: +256-041-314268
Email: mintrade@mtti.go.ug
- Uganda Wildlife Education Centre (UWEC)
Plot 56/57 Johnston Street
P.O Box 369 Entebbe
Tel: +256 414 322169
- Wildlife Clubs of Uganda
Plot 33/55 Lugogo Show Grounds
P. O Box 4396 Kampala
Tel: 0312 271 450
Email: wcu@wildlifeclubs.org
- Uganda Wildlife Society
Plot 1521 Mawanda Road, Kamwokya
P.O. Box 7422, Kampala
Tel: 256-414-530891
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WATER

Uganda is endowed with significant surface and ground water resources. However, water resources are under increasing threat of degradation as exhibited in reduced quality and quantities in major freshwater bodies. Soil erosion and industrial pollution have reduced surface water quality. Watershed degradation and climate change also reduce surface and ground water quantities. The total annual consumptive use of water for production is very low at less than one percent of total available renewable water resources.²⁸

INSTITUTIONAL FRAMEWORK

- Ministry of Water and Environment
- Directorate of Water Development (DWD)
- National Water and Sewerage Corporation (NWSC)

POLICY AND LEGAL FRAMEWORK

- National Water Policy, 1999
- National Water and Sewerage Corporation Act, 2000
- Water Act, 1997
- Water Resources Regulations, 1998

ACTION POINTS FOR LEGISLATORS

- Water is a key strategic resource and access to clean water is a fundamental human right. As such maintaining good water quality and adequately managed aquatic resources is essential for advancing development and promoting a healthy population. Controlling industrial pollution and soil erosion to ensure good water quality should be a key interest of the Legislature.
- Water resource use planning needs to be improved, particularly as water resources are increasingly being used for commercial agriculture and hydropower.
- There is need to create strong institutions by filling the existing capacity gaps, allocating adequate funds and equipping personnel with skills for meaningful management of water resources, particularly in rural and poor urban areas. For instance the handling of issues related to the trans-boundary nature of River Nile requires a strong legislature to avoid resource conflicts and degradation.

USEFUL CONTACTS

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Email: mwe@mwe.go.ug

- Directorate of Water Development
Plot 21/28 Port Bell Road, Luzira
P.O. Box 20026 Kampala
Tel: +256 414 220374

- National Water and Sewerage Corporation
Plot 39, Jinja Road
P.O.BOX 7053, Kampala
Tel: +256-414-315000

- National Environment Management Authority
NEMA House
P.O Box 22255 Plot 17/19/21, Jinja Road, Kampala
Tel: +256 414 251064 / Fax: +256 414 257521
Website: www.nemaug.org

- Nile Basin Initiative
Nile Basin Secretariat Plot 12 Mpigi Road
P.O. Box 192, Entebbe
Tel: 041-321424/321329/320971

- Uganda Nile Discourse Forum
P.O Box 7422 Plot 1521 Mawanda Road, Kamwokya
Tel: 0414 530891

WETLANDS

Wetlands are areas where land and water meet and mingle. They include areas of open water, such as lakes and rivers; land that is permanently flooded, such as swamps; saturated land such as bogs; or seasonally inundated land as is the case with floodplains.²⁹ Wetlands in Uganda cover almost 30,000 square kilometres, constituting about 13 percent of the total area of the country. It is estimated that over 5 million people in Uganda depend on wetlands directly for water supply valued at over US\$ 25 million per year³⁰ through ground water recharging, water storage and purification. Wetlands are also important in Uganda for controlling floods, filtering wastes, dry season fishing and live-stock grazing, and tourism.

Wetlands continue to suffer from pollution, conversion to other uses such as agriculture and human settlement.³¹ Estimates indicate that more than seven percent of the original wetland area in Uganda has been converted for other uses.³² This has resulted in loss of biodiversity, especially for species that thrive or breed in wetlands.

INSTITUTIONAL FRAMEWORK

- Wetlands Management Department (Ministry of Water and Environment)
- District Wetland Offices

POLICY AND LEGAL FRAMEWORK

- National Wetlands Policy, 1995
- National Environment Management Policy, 1997
- National Environment Management Act, 1995
- National Environment (Wetlands, River Banks, and Lakeshores management) Regulations, 2000

ACTION POINTS FOR LEGISLATORS

- A general public attitude continues to exist that views wetlands as ‘waste lands’ and, therefore, causes people to consider short-term benefits of wetland use as opposed to long-term benefits. Public education of wetland long-term benefits is required to make current wetland uses more sustainable.
- Due to the vital importance of wetlands to many households countrywide, there is need to increase local and central government political support and funding to the wetlands sector. This will become increasingly important as wetlands play a buffer role against extreme weather related to climate change.
- The Wetlands Management Department requires increased support to improve and increase its human and logistical resources, particularly for monitoring purposes.

USEFUL CONTACTS

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Ministry of Water & Environment
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- National Environment Management Authority
NEMA House
P.O Box 22255 Plot 17/19/21, Jinja Road, Kampala
Tel: +256 414 251064 / Fax: +256 414 257521
Website: www.nemaug.org

- Nature Uganda
Plot 83 Tufnel Drive, Kamwokya
P.O Box 27034, Kampala
Tel: +256414 540719 / Fax: +256414 533528
Email: nature@natureuganda.org

- International Union for Conservation of Nature (IUCN)
Plot 39, Babiha Avenue
P.O Box 10950, Kampala
Tel: +256 414 344-508 /233-738 / Fax: +256 414 342-298
Email: uco@iucn.co.ug

WILDLIFE/ BIODIVERSITY

Uganda hosts an exceptional number of animal and plant species due to the wide variety of aquatic and terrestrial ecosystems, which range from mountains, rainforest, deciduous bushlands and extensive freshwater resources. Uganda's biological diversity ranks within the top ten in the world.

Wildlife in Uganda is increasingly being found in protected areas only. It is these protected areas (particularly national parks) that generate the majority of Uganda's tourism revenue. Tourism presently ranks third in foreign exchange earnings and the sector drew US\$560 million from wildlife tourism in 2008. This makes tourism one of Uganda's top revenue earners.

INSTITUTIONAL FRAMEWORK

- Ministry of Tourism, Trade and Industry (MTTI)
- Uganda Wildlife Authority (UWA)
- Uganda Wildlife Education Centre (UWEC)

POLICY AND LEGAL FRAMEWORK

- Uganda Wildlife Policy, 1999
- Uganda Tourism Policy, 2003
- Uganda Wildlife Act, Cap 200

ACTION POINTS FOR LEGISLATORS

- Uganda has been proactive in establishing and maintaining numerous wildlife protected areas, but the need to protect biodiversity outside protected areas is becoming increasingly important to serve as a buffer to protected areas and increase tourism revenues.
- With the majority of petroleum development occurring in protected areas of the Albertine Rift, oil companies should be compelled to develop biodiversity action plans that indicate future actions designed to protect, restore and enhance biodiversity and its habitat.
- Competition for resources between wildlife and humans needs to be urgently addressed. Benefit sharing should focus primarily on communities living adjacent to protected areas and those that bear the brunt of historical injustices committed in the creation of protected areas.

- The Legislature should also address the degazettement and change of land use in protected areas for political and private commercial purposes.

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P.O.Box 7103 Kampala
Tel: +256-041-314268
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- Uganda Wildlife Education Centre (UWEC)
Plot 56/57 Johnston Street
P.O Box 369 Entebbe
Tel: +256 414 322169
- Wildlife Clubs of Uganda
Plot 33/55 Lugogo Show Grounds
P. O Box 4396, Kampala
Tel: 0312 271 450
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the 1990s, the number of people in the world who are undernourished has increased from 600 million to 800 million (FAO 2001).

There are a number of reasons for this increase. One of the main reasons is the increase in the number of people in the world. The world population is expected to increase from 6 billion in 1999 to 9 billion in 2050 (UN 2000). This increase in population is expected to be most pronounced in the developing countries, where the population is expected to increase from 4 billion in 1999 to 7 billion in 2050 (UN 2000).

Another reason for the increase in the number of undernourished people is the increase in the number of people who are living in poverty. The number of people living on less than \$1 per day is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000). This increase in poverty is expected to be most pronounced in the developing countries, where the number of people living on less than \$1 per day is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000).

A third reason for the increase in the number of undernourished people is the increase in the number of people who are living in rural areas. The number of people living in rural areas is expected to increase from 5 billion in 1999 to 6 billion in 2050 (UN 2000). This increase in rural population is expected to be most pronounced in the developing countries, where the number of people living in rural areas is expected to increase from 5 billion in 1999 to 6 billion in 2050 (UN 2000).

A fourth reason for the increase in the number of undernourished people is the increase in the number of people who are living in arid and semi-arid areas. The number of people living in arid and semi-arid areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000). This increase in arid and semi-arid population is expected to be most pronounced in the developing countries, where the number of people living in arid and semi-arid areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000).

A fifth reason for the increase in the number of undernourished people is the increase in the number of people who are living in coastal areas. The number of people living in coastal areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000). This increase in coastal population is expected to be most pronounced in the developing countries, where the number of people living in coastal areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000).

A sixth reason for the increase in the number of undernourished people is the increase in the number of people who are living in mountainous areas. The number of people living in mountainous areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000). This increase in mountainous population is expected to be most pronounced in the developing countries, where the number of people living in mountainous areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000).

A seventh reason for the increase in the number of undernourished people is the increase in the number of people who are living in highland areas. The number of people living in highland areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000). This increase in highland population is expected to be most pronounced in the developing countries, where the number of people living in highland areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000).

A eighth reason for the increase in the number of undernourished people is the increase in the number of people who are living in lowland areas. The number of people living in lowland areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000). This increase in lowland population is expected to be most pronounced in the developing countries, where the number of people living in lowland areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000).

A ninth reason for the increase in the number of undernourished people is the increase in the number of people who are living in island areas. The number of people living in island areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000). This increase in island population is expected to be most pronounced in the developing countries, where the number of people living in island areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000).

A tenth reason for the increase in the number of undernourished people is the increase in the number of people who are living in urban areas. The number of people living in urban areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000). This increase in urban population is expected to be most pronounced in the developing countries, where the number of people living in urban areas is expected to increase from 1 billion in 1999 to 2 billion in 2050 (UN 2000).

RECOMMENDATIONS

Over and above the proposed action points for legislators listed in each section of this handbook, a few overarching recommendations are important for legislators to consider. These include:

DEVELOPING A READING CULTURE: With a number of policies and laws in place, legislators need to develop interest in reading them in order to empower themselves to hold various duty-bearers accountable.

IMPROVING RESEARCH CAPACITY: There is a need for legislators to improve the research capacity of the legislature. This will allow them to identify and address the gaps in the existing policy, and legal and institutional frameworks for natural resource management in Uganda. Legislators may also wish to take advantage of the research capacity in independent national and international policy research think-tanks such as the Uganda Wildlife Society, Advocates Coalition for Development and Environment, GreenWatch, the International Union for Conservation of Nature and the World Resources Institute.

SUMMARY OF KEY ENVIRONMENTAL LAWS, POLICIES AND STRATEGIES

SECTOR	POLICY
Environment	National Environment Management Policy, 1994
Water	National Water Policy, 1995
Wetlands	National Policy for the Conservation and Management of Wetland Resources, 1995
Wildlife	Uganda Wildlife Policy, 1999 Uganda Tourism Policy, 2003
Forests	Uganda Forest Policy, 2001
Land	National Soils Policy, 2002 Land Policy (draft)
Fisheries	Fisheries Policy, 2003
Biodiversity	Cross-cutting among other policies
Energy	Energy Policy for Uganda, 2002
Minerals	Uganda Mineral Policy, 2000

Source: NEMA 2006

LAW

National Environment Act, 1995

National Water Act, 1995

National Environment Act, 1995

Uganda Wildlife Act, 1996

National Forestry and Tree
Planting Act, 2003

The Land Act, 1998

Draft fisheries Act, 2004

Cross-cutting among other laws

The Electricity Act, 1999

Minerals Development Act, 1999

STRATEGY

National Environment Action
Plan, 1994

National Water Action Plan, 1995

The Strategic Wetlands Conser-
vation Plan, 2001-2010

Uganda tourism marketing
strategy

National Forestry Plan

The Land Sector Strategic Plan

Fisheries Strategic Plan

National Biodiversity Strategic
Action Plan, 2002

The Rural Electrification Strat-
egy and Plan, 2001-2010

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19. Moyini, Y., Muramira, E. T. and Alumai, G. (2007). *Analysis of Budgetary Allocation to the ENR Sector for the Past Five Years*. ACODE Policy Research Report. Kampala: ACODE.
20. National Forestry Authority (2009). *National Biomass Study Report*. Kampala: National Forestry Authority.
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This handbook is organised according to various environment and natural resource focus areas in Uganda. Within each of these focus areas is a brief statement of current status, prevailing institutional, policy and legal framework, points for legislators to consider action on, and useful contacts for legislators to consider. The twelve focus areas addressed in this handbook are: agriculture, climate change, energy, fisheries, forests, land, oil and gas, pollution, tourism, water, wetlands and wildlife/biodiversity.

The handbook also summarises all key environmental laws, policies and strategies for ease of reference to legislators.