



THE REPUBLIC OF UGANDA

**THE NATIONAL ENVIRONMENT
MANAGEMENT POLICY FOR UGANDA
2014**

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FORWARD

The country is facing serious environmental degradation which is eroding her natural resource base. Consequently our development process is threatened. We have an enormous task as to how best we should manage our resources while ensuring that the much needed socio-economic development is allowed to expand. Poverty and high population growth rates have also led to increased pressure on the environment.

Viewed within this context, Government through the NEAP process put in place in 1994, the National Environment Management Policy with strategies for integrating environmental concerns into national socio-economic development planning process. It is now twenty years running in the implementation of the Environment Policy, and this calls for stock taking of the achievements, setbacks, future opportunities and priorities for improved environmental management in Uganda.

Designed as a framework policy, the NEMP (1994) was intended to provide an enabling framework for related policies in the environment arena and a roadmap for management of environment resources in Uganda. Besides, the Policy was partly developed in response to the 1992 World Summit on Sustainable Development signed in Rio De Janeiro Brazil under different national and global planning frameworks. Since then, a number of new developments and issues have emerged including the Millennium Development Goals (MDGs), the post MDG agenda (Sustainable Development Goals), and the recently signed post Rio +20 outcomes on the “Future We want” which emphasizes the Green Economy as a new model of development. There have also been national initiatives like Uganda Vision 2040, the National Development Plan; regional efforts such as East African Community (EAC) policy initiatives and protocols on cross-border natural resources and environment management and climate change. All these make the review of a policy developed way back in 1994 inevitable

In spite of the above underlying factors, significant achievements have been made during the implementation of the NEMP (1994) some of which include the following:

- (i) Enhanced compliance to environmental standards by 70% in various industries including breweries, beverages, sugar tanneries and cement industries as a result of enhanced inspections, audits, monitoring, compliance agreements and adoption of cleaner production processes.
- (ii) Established a system for sound management of environmental aspects of oil and gas throughout the petroleum value chain through; development of sensitivity atlases, environment monitoring plan, Strategic Environment Assessment (SEA), Environment Impact Assessment (EIA) and Audit processes, public education and awareness, establishment of an office in the Albertine Graben, regular monitoring and inspections, oil waste management and review of environment legislation to include aspects of oil and gas;
- (iii) Enhanced the Implementation of Government of Uganda commitments to multilateral environment agreements (MEAs) and conventions specifically: developing and implementing the National Biodiversity Strategy and Action Plan (NBSAP); established a

- Clearing House Mechanism (CHM) for Biodiversity information; reduced the importation of Ozone depleting substance and products under the Montreal Protocol; developed a national profile for Persistent Organic Pollutants (POPs), established a National Implementation Plan and developed regulations on sound management of Chemicals; facilitated the ratification of the Nagoya protocol and the Minamata Convention; and regulated the transboundary movement of hazardous waste in collaboration with URA in line with the Basel Convention.
- (iv) Developed and supported policy and legal frameworks for environment management including: Electronic Waste; Sound Management of Chemicals, national petroleum laws, wildlife and water policies, the National Environment Management Policy and the National Environment Act; and Climate Change Policy.
 - (v) Enhanced integration of environmental aspects into national, sectoral and local government policies, plans, programmes and budgets including the private sector as a result of routine capacity building, supervision and monitoring and policy reviews and dialogues.
 - (vi) Restored degraded critical ecosystems such as catchments of Lake Victoria (Bugiri, Jinja, Mpigi, Kalangala, Rakai, Isingiro, Mitooma and Kalungu) River Nile (Jinja, Kayunga, Kamuli, Nebbi), Lake Kyoga basin (Kumi, Ngora, Kibuku, Pallisa), hilly areas and river banks (Nebbi, Bushenyi, Ntungamo, Kabale, Kisoro) ; support to Forest Conservation (Hoima, Kibaale). The Kalagala Sustainable Management Plan (KSMP) has been operationalised under Mabira Forest Ecosystem to off-set the impacts of Bujjagali Energy Limited. Rangelands Management Action plans have been prepared for some districts under the cattle corridor. Supported the development of watershed management plans based on wetland systems and communities have been empowered to conserve and sustainably manage ecosystems.
 - (vii) Increased environmental information and education through the generation and sharing of environmental information using two yearly National State of the Environment Reports (SOER), holding policy dialogues and debates and outreach programmes. Also, on a regular basis, national communication reports are prepared and submitted to the secretariats of international conventions.
 - (viii) Facilitated several public and private investments in the country such as the Bujagaali, Karuma HEP, Isimba HEP, Road Infrastructure projects, industrial development projects, Telecoms, Housing, Power distribution, water and sanitation projects, palm oil project in Kalangala through the EIA process.
 - (ix) Effectively coordinated the Rio+20 sustainable development processes including the post 2015 development agenda; the Sustainable Development Goals (SDGs) negotiation processes and coordinating the implementation of the outcomes and commitments such as transition to a Green Economy and a shift towards Sustainable Consumption and Production (SCP).

Although there have been successful environment management interventions during the implementation of the NEMP (1994), generally the quantity, quality, diversity and productivity of ENR is

on a downward trend. The demand for ENR has however continued to increase as a result of population growth and unsustainable consumption and production patterns

The overall objective of the Policy Review of the National Environment Management Policy was to identify critical lessons learnt from its implementation since 1994, including gaps and emerging issues so as to make the policy more effective in addressing environmental management in Uganda in today's setting. The NEMP review and formulation processes were highly consultative and stakeholder consultations were at the local, national, EAC Partner States and EAC Secretariat levels.

The new and emerging issues identified include, among others, Climate Change, Oil and gas discovery, Disaster Reduction and Risk Management; Strategic Environmental Assessment (SEA); Invasive and Alien species, e-Waste management, Cross boarder / transboundary natural resource management, Unclear International Boundaries, High Population growth, Urbanization (Rural-urban migration); Industrialization (the negative impacts of industrialization); Green Economy and Sustainable Development; Biosafety and Biotechnology etc. Policy recommendations have been made for these emerging environmental and developmental issues.

I wish to thank all those who have contributed in one way or another to the review of the NEMP (1994) and formulation of the NEMP(2014). Special thanks go to the UNDP for the financial support for the NEMP review and formulation processes. Policy recommendations contained in the revised NEMP (2014) will no doubt provide a very useful contribution to the management of our environment.

Rt.Hon.PM

ACRONYMS AND ABBREVIATIONS

APRM	African Peer Review Mechanism
BBOP	Business and Biodiversity Offsets Programme
CBD	Convention on Biological Diversity
CC	Climate Change
CHM	Clearing House Mechanism
CSO	Civil Society Organization
DRR	Disaster Risk Reduction
EAC	East African Community
EIA	Environmental Impact Assessment
ENR	Environment and Natural Resources
ESIA	Environment and Social Impact Assessment
GMO	Genetically Modified Organism
GOU	Government of Uganda
IAS	Invasive and Alien Species
IWRM	Integrated Water Resources Management
LG	Local Government
MDAs	Lead Agencies and Local Governments
MDGs	Millennium Development Goals
MEAs	Multi Lateral Environmental Agreements
MEMD	Ministry of Energy and Mineral Development
MLUD	Ministry of Land and Urban Development
NBSA	National Biodiversity Strategy and Action Plan
NDP	National Development Plan
NEAP	National Environment Action Plan
NEMA	National Environment Management Authority
NEMP	National Environment Management Policy
NGO	Non Government Organizations
PA	Protected Area
PCE	Policy Committee on Environment
PES	Payment for Ecosystem Services
PPP	Public Private Sector Partnership
SEA	Strategic Environment Assessment
SDGs	Sustainable Development Goals
SLM	Sustainable Land Management
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification and Drought
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change

EXECUTIVE SUMMARY

Introduction

Uganda is endowed with a rich and diverse environment and natural resource base which underpins economic growth and livelihoods security. There are strong linkages between ENR and other sectors of the economy notably agriculture, tourism and health in addition to supporting the attainment of regional and international commitments such as the MDGs/SDGs. Indeed in spite of the on-going structural transformation, Uganda is still a natural resource based economy, with ENR significantly contributing to food and energy security, GDP, employment, foreign exchange earnings and local revenues. Eighty five per cent of the population is highly dependent on natural resources for their livelihood.

Its significant contribution notwithstanding, ENR is under threat from both natural and man-made drivers of change including; poverty, rapid population growth, unplanned urbanization, expansion of informal settlements, industrialization and the impacts of climate change and weather variability among others. Fragile ecosystems including hilly and mountainous areas, riverbanks, lakeshores and rangelands are facing encroachment and degradation. Pollution levels are also on the increase and the country is contending with new and emerging environmental issues arising from e-waste, unsound use of chemicals, oil and gas development and the impacts of climate change.

In light of the above, the Government of Uganda with financial support from the United Nations Development Programme (UNDP) undertook a review and updating of the National Environment Management Policy (NEMP) 1994. The overall objective of the review of the NEMP (1994) was to undertake a thorough review of the policy taking into account achievements, lessons learnt during its implementation since 1994, including filling gaps and bringing on board emerging issues so as to make the policy more effective in addressing environmental management in Uganda.

NEMP Review and Formulation Process

The NEMP review process took into account the NEAP process and products, which include the thematic approach in the NEAP process. It also took into account the current national initiatives like the Uganda Vision 2040, the National Development Plan (2010); regional efforts such as East African Community (EAC) policy initiatives and protocols on cross-border natural resources and environment management, climate change and socio-economic aspects; and global commitments like the Rio+20 outcome and commitments, the MDGs; the Sustainable Development Goals (SDGs) and the Green Economy concepts in the context of sustainable development. To ensure ownership of the review process and support the realization of its objectives the review took an iterative, consultative, and participatory process. It involved bottom-up and top-down approaches to ensure adequate participation at the central and Local Government levels, civil society groups and the private sector.

In a similar manner, during the NEMP (2014) formulation more consultations were carried out at regional and national levels and the NTF provided more guidance and input. At EAC level consultations and visits were made to the Kenya National Environment Management Authority in Nairobi; Rwanda

Environment Management Authority (REMA) in Kigali and EAC Secretariat in Arusha. The consultations with EAC Partner States and EAC Secretariat enriched views on transboundary issues, regional and EAC protocols and overall ENR governance.

During the consultations stakeholders recommended that the policy should be maintained in its current structure and most of the thematic areas are still very relevant. Consequently the revised policy has brought on board new / emerging development and environmental issues, filled gaps and where necessary updated / overhauled the old thematic areas so as to make them more relevant to current issues.

The revised National Environmental Management Policy (NEMP, 2014) is the cornerstone of the country's commitment to social and economic development that is environmentally sustainable and which will bring the benefits of a better life to all. The policy is meant to be broad / cross cutting and flexible so as to be able to meet changing circumstances. It should be made known to people, and espoused by all projects and programs, public and private, and by all resource managers and land users as a charter for better environmental management in Uganda. In brief, it should be the foundation of sustainable socio-economic development.

Emerging Development and Environmental Issues

A number of new development and environmental issues have emerged since 1994 and have been incorporated in the revised policy (NEMP, 2014). Policy objectives, guiding principles and strategies have been developed for the emerging issues. The new thematic areas and old thematic areas with major changes are summarized below and are arranged under Cross-Sectoral; Sectoral and Implementation Arrangements Sections:

CROSS-SECTORAL - Under cross –sectoral the new thematic areas include: Payment for Ecosystem Services (PES); Strategic Environmental Assessment (SEA); Management of Electronic and other Hazardous/Toxic Waste; Sound Chemicals Management; Climate Change and Weather Variability; Biosafety and Biotechnology; Biodiversity Offsets; Public-Private Sector Partnerships and Public Participation in Environment Management; Disaster Risk Reduction & Management and Biodiversity Offsets.

SECTORAL - Under sectoral the new thematic areas are: Invasive and Alien Species; Oil and Gas; Minerals and Mining; Hilly and Mountainous Ecosystems & Riverbanks and Lakeshores (Fragile Ecosystems)

POLICY IMPLEMENTATION - Under policy implementation the new and revised thematic areas include: Institutional Framework /Coordination and Governance; The role of Research and academia in the implementation of NEMP; The role of CSOs, Cultural and Faith Based Institutions in Environmental Policy Implementation; and Under Regional and International Cooperation the new thematic areas are: Green Economy and Sustainable Development; Transboundary / Cross Boarder Natural Resource Management; Atmospheric Resources.

CHAPTER 1: INTRODUCTION

1.1 Environment and Natural Resources and Uganda's Economy.

Uganda is endowed with a rich and diverse environment and natural resource base which underpins economic growth and livelihoods security. There are strong linkages between ENR and other sectors of the economy notably agriculture, tourism and health in addition to supporting the attainment of regional and international commitments such as the MDGs/SDGs. Indeed in spite of the on-going structural transformation, Uganda is still a natural resource based economy, with ENR significantly contributing to food and energy security, GDP, employment, foreign exchange earnings and local revenues. Eighty five per cent of the population is highly dependent on natural resources for their livelihood.

Its significant contribution notwithstanding, ENR is under threat from both natural and man-made drivers of change including; poverty, rapid population growth, unplanned urbanization, expansion of informal settlements, industrialization and the impacts of climate change and variability among others. Fragile ecosystems including hilly and mountainous areas, riverbanks, lakeshores and rangelands are facing encroachment and degradation. Pollution levels are also on the increase and the country is contending with new and emerging environmental issues arising from e-waste, unsound use of chemicals, oil and gas development and the impacts of climate change.

1.2 Multilateral Environmental Agreements and Regional Agreements

Uganda has ratified and is implementing several International Conventions and Protocols, most notably the Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC), the Convention to Combat Desertification and Drought (UNCDD) among others. As a member of NEPAD, apart from subjecting its governance process to the African Peer Review Mechanism (APRM), Uganda prioritizes investment in environmental and natural resources and sustainability. Similarly, Uganda is a member of the 10-country Nile Basin Initiative (NBI) whose programmes and policies influence Uganda's natural resources management frameworks, including the management of trans-boundary water resources.

At the regional level, Uganda is a member state of the East African Community (EAC) and consequently, is signatory to its protocols. Key among these is the EAC Protocol on Environment and Natural Resources (2006) and the EAC policy on Climate Change.

1.3 Implementation of Rio Commitments and National Development Planning

In 2012 Uganda took stock of the progress in implementation of Agenda 21 and other commitments in Rio+20. One of the overarching achievements is that since 1992, Uganda put in place national instruments (e.g. National Constitution of 1995, National Development Plan 2010/11-2014/15 and Vision 2040) to facilitate achieving the sustainable development and a green economy. Many policies

relating to environment pillar have been put in place. These include policies and laws related to water, forestry, energy, agriculture, wildlife, and disaster prepared sectors

In 2007, Government adopted a comprehensive National Development Planning Framework and the framework was rationalized into Uganda Vision 2040 that provides development paths and strategies towards the national vision of *“A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years”*. It aims at transforming Uganda from a predominantly peasant and low income country to a competitive upper middle income country. In the context of environment, Vision 2040 envisages to attain a green and clean environment with no water and air pollution while conserving the flora and fauna and restoring and adding value to the ecosystems.

In view of the above, sustainable utilization of the ENR will be addressed in line with Uganda’s commitment to the principles of the Rio Declaration on Environment and Development, the Programme for the Further Implementation of Agenda 21 and the Plan of Implementation of the World Summit on Sustainable Development (Johannesburg Declaration on Sustainable Development) among others. Uganda will take urgent measures to protect the environment and natural resources and ensure their future sustainability.

1.4 NEMP Review and Formulation Process

The NEMP review process took into account the NEAP process and products, which include the thematic approach in the NEAP process. It also took into account the current national initiatives like the Uganda Vision 2040, the National Development Plan (2010); regional efforts such as East African Community (EAC) policy initiatives and protocols on cross-border natural resources and environment management, climate change and socio-economic aspects; and global commitments like the Rio+20 outcome and commitments, the MDGs; the Sustainable Development Goals (SDGs) and the Green Economy concepts in the context of sustainable development. Consequently extensive literature review was carried out on National and Sectoral Development Plans and policies; EAC regional plans and policies; and international commitments and MEAs. To ensure ownership of the review process and support the realization of its objectives the review took an iterative, consultative, and participatory process. It involved bottom-up and top-down approaches to ensure adequate participation at the central and Local Government levels, civil society groups and the private sector. The review process started in April 2013 with a diagnostic study of the NEMP’s performance. From the diagnostic study it was recommended to have wider consultations with all stakeholders

Consultations were consequently carried out at regional level and at the centre. The sector and cross-sectoral consultations at the centre mainly targeted the top policy makers and administrators in the key sectors with a direct bearing on the environment. Most of them were the key implementers of the NEMP. The regional consultative workshops targeted district leaders and politicians, district heads of departments, environment officers, natural resource officers, forestry officers, education officers, agriculture officers and other technical people at both the district headquarters and municipalities. Other invited participants included Non-Government Organizations (NGOs), Civil Society Organizations (CSOs) among others. The National Task Force (NTF) derived from line Ministries, Departments and

Agencies (MDAs) worked in tandem with consultants to guide regional participants in the consultative workshop. All regions were consulted and district venues for regional workshops were selected on the basis of institutional memory- districts that existed at the time the policy was developed. Masaka district was the venue for the central region, Mbarara for the western region, Lira for the northern region, Mbale for the eastern region and Arua district for West Nile region. The choice/ selection of districts was purposefully meant to target “old” districts that were extensively involved in the implementation of the NEMP.

During the NEMP (2014) formulation more consultations were carried out at regional and national levels. At national level the policy formulation consultations took a pattern very similar to the consultations during the review process. At EAC level consultations and visits were made to the Kenya National Environment Management Authority in Nairobi; Rwanda Environment Management Authority (REMA) in Kigali and EAC Secretariat in Arusha. The consultations with EAC Partner States enriched views on transboundary issues, regional and EAC protocols and overall ENR governance.

The revised National Environmental Management Policy (NEMP, 2014) is the cornerstone of the country’s commitment to social and economic development that is environmentally sustainable and which will bring the benefits of a better life to all. The policy is meant to be broad / cross cutting and flexible so as to be able to meet changing circumstances. It should be made known to people, and espoused by all projects and programs, public and private, and by all resource managers and land users as a charter for a better Uganda. It should be the goal on which everyone sets his/her sights and pursues to the best of his/her ability. In brief, it should be the foundation of sustainable socio-economic development.

1.5 Key Lessons Learnt during the implementation of the NEMP (1994)

- (i) Stakeholders noted continued environmental degradation and the declining ecosystems integrity despite the good environmental policy and accompanying legislation, laws and regulations;
- (ii) Weak areas during the NEMP (1994) implementation: poor participation of the private sector and CSO’s at all levels; there was no M&E Strategy hence the policy could not be effectively monitored; there was no Communication strategy hence the policy was not known to many stakeholders;
- (iii) Lack of periodic reviews of the ENR Sub-sector performance and the NEMP to identify emerging issues requiring further policy interventions at least every five years
- (iv) Need to review the NEMP at least every ten years.

CHAPTER 2: POLICY GOALS AND PRINCIPLES

2.1 The Overall Policy Goal

The overall policy goal is sustainable development which maintains and promotes environmental quality and resource productivity for socio-economic transformation.

2.2 Key Policy Objectives

Specifically, the policy seeks to meet the following objectives:

- (i) To promote long-term, socio-economic development for improved health and quality of life through sound environmental and natural resource management;*
- (ii) To integrate, in a participatory manner, environmental concerns in all development policies, plans, activities and budgets at national, district and local levels;*
- (iii) To conserve, restore and gazette ecosystems to maintain ecosystems services for life support especially conservation of national biological diversity;*
- (iv) To optimize resource use to achieve a sustainable level of resource consumption*
- (v) To educate and raise public awareness on linkages between environment and development including employment, wealth creation and sustained economic growth;*
- (vi) To promote individual and community participation in environmental improvement activities*

2.3 Key Principles

Underlying these broad policy objectives are certain key principles which will guide policy development and implementation strategies. The NEMP (2014) will be guided by eight key principles that are derived from the country's experiences, with lessons learned from implementing the NEMP (1994).

(i) A clean, safe and productive environment;

- a) Every person has a constitutional right to live in a clean and healthy environment and the obligation to keep the environment clean, safe and productive
- b) Priority should be given to establishing a social and economic environment which provides appropriate incentives for sustainable natural resource use and environmental management;
- c) Maintain a proper balance between socio-economic development and environment management to ensure sustainable development and long-term food security;

(ii) A robust natural resource and environment management regime;

- a) The development of Uganda's economy should be based on sustainable natural resource use and sound management
- b) The enforcement capacity of environmentally related laws should be taken as a priority for sustainable natural resource and environmental management;

(iii) Improved productivity of our natural resource base;

- a) Environmentally friendly, socially acceptable and affordable technologies should be developed and disseminated for efficient use of natural resources;
- b) Security of land and resource tenure is a fundamental requirement of sustainable natural resource management
- c) Long-term food security depends on sustainable natural resource and environmental management

(iv) Optimum utilization of renewable and non renewable resources;

- a) The utilization of non-renewable resources should be optimized and where possible their life extended by recycling;
- b) Long-term food security depends on sustainable natural resource and environmental management

(v) Total economic value of environmental costs and benefits;

- (i) Full environmental and social costs or benefits foregone as a result of environmental damage or degradation should be incorporated in public and private sector planning and minimized where possible

(vi) Social inclusion and equity;

- a) Effective involvement of women and youth in natural resource policy formulation, planning, decision making, management and program implementation is essential and should be encouraged;
- b) Increased awareness and understanding of environmental and natural resource issues by Government and the public should be promoted
- c) Conditions and opportunities for communities and individual resource managers to sustainably manage their own natural resources and the environment should be created and facilitated;

(vii) International and regional cooperation;

- a) Adherence to the multi-lateral environmental agreements and the EAC Protocol on Environment should be strengthened
- b) Domestication and enhancement of synergies and linkages in the implementation of MEAs, regional and sub-regional cooperation frameworks should be enhanced.
- c) Sub-regional, regional and global environmental interdependence should be recognized.

(viii) Total compliance with enforcement and regulatory frameworks;

- d) Compliance with environmental legislation and standards should be enhanced
- e) Social and economic incentives and disincentives should compliment regulatory measures to influence people's willingness to invest in sustainable environmental management;

CHAPTER 3: CROSS-SECTORAL POLICY OBJECTIVES, PRINCIPLES AND STRATEGIES

Creating an integrated and multi-sectoral systems approach to planning and management resources and the environment is fundamental to sustainable socio-economic development. To accomplish this, policies are needed which address cross-sectoral environmental management issues. The following cross-sectoral policies, objectives and strategies are prioritized based on three criteria (i) the seriousness or urgency of the problem the policy is to address; (ii) the potential contributions of the policy to the economy and social well-being; and (iii) the policy's potential for solving the problem.

3.1 Land and Resource Tenure

The land tenure system prevailing in the country involves a mixture of customary tenure, private mailo land, freehold and leasehold. This system does not provide security of tenure needed for sustainable socio-economic development. Devising a comprehensive, legitimate, accessible and cost-effective framework to tackle the root and structural causes of conflict, disputes and frictions arising from unjust actions in the past is a prime challenge in tackling uncertainty and insecurity over land rights (Uganda National Land Policy, 2013)

Objectives

- (i) To promote sustainable utilization, protection and management of environment and natural resources for socio-economic development; and*
- (ii) To promote improved land stewardship by rural and urban land users for sustainable land use.*

Guiding Principles

- (i) Equity and justice in access to land irrespective of gender, age, disability or any other reason created by history, tradition or custom;
- (ii) Effective regulation of land use and land development;
- (iii) The regulation of resource management on common property in different areas should be the responsibility of traditional community institutions (formal and informal) who should work in line with relevant national policies and regulations.
- (iv) In pastoral areas, pastoral groups should be provided with secure access and user rights to traditional grazing areas and water sources to the extent feasible.

Strategies are to:

- (i) Re-orient the land sector in national development
- (ii) Develop mechanisms for improved and sustainable management of common property resources
- (iii) Require all land tenures to carry conditions which prohibit environmentally unacceptable land – use practices;

- (iv) Promote incentives and reward mechanism for sustainable productive use, as well as other measures intended to streamline the institutional framework for land administration and management;
- (v) Strengthen essential reforms for stemming off escalating land conflicts and land evictions

3.2 Land Use Policy and Planning

Land plays a vital role in the health and vitality of other sectors that depend on it for productivity. The integration of the land sector into the overall national planning through the identification of effective linkages with other productive sectors will leverage these sectors to realize economic growth and employment creation. Given the high rate of population growth which is exerting increasing pressure on the land / natural resource base, rational land use planning is essential for achieving sustainable socio-economic development.

Objectives:

To promote planned, environmentally-friendly, rural and urban land use /development. .

Guiding principles:

- (i) Effective regulation of land use and land development;
- (ii) Land use decision should be based on both biophysical factors (carrying capacity, soil types, vulnerability to degradation, wetland values, biodiversity impact, pollution potential) as well as socio-economic criteria and commercial competitiveness;
- (iii) National and district land use plans should be the implementation instruments of land use planning.
- (iv) District land use guidelines and plans should enable parish and village authorities to develop their own land use plans and land and water management agreements; and
- (v) The formulation of strategic land use plans and guidelines should be done in maximum consultation with and reviewed by local district councils and the affected people (including women)

Strategies are to:

- (i) Harmonize the existing legislations to integrate best practices for environment management;
- (ii) Develop technically appropriate, socially acceptable, and environmentally sound rural and urban land use plans and guidelines for sustainable resource use;
- (iii) Develop capacity for all Local Governments to develop ordinances and bye laws for land management;

3.3 Environmental Information

Sustainable management of environmental resources and the need to continuously anticipate new and emerging challenges requires availability of timely, up-to-date and accurate information.

Objectives:

- (i) To collect, analyze, store, and disseminate on a continuous basis, reliable information relating to environmental management issues and resources; and*
- (ii) To Position NEMA as a central hub for the management and dissemination of environmental information.*

Guiding principles

- (i) The right to live in a clean and healthy environment should carry a right to be informed about environmental issues;
- (ii) Environmental information of an unclassified or non-proprietary nature in all sectors should be available to all users;
- (iii) Legal and institutional guidelines on information management should be well defined;
- (iv) All data collection, analysis and information dissemination on existing and emerging environmental issues should be coordinated and standardized;
- (v) The development of district and sub- county monitoring and evaluation capabilities is critical to improvement of environmental information management; and
- (vi) The primary institutional responsibility for specialized data collection should remain with the lead agencies but a centralized system for data storage, analysis and sharing is essential.

Strategies are to:

- (i) Develop and implement an environment information knowledge management system and communication strategy;
- (ii) Develop legislation and guidelines on environmental information gathering, sharing and dissemination;
- (iii) Strengthen the Environmental Information Network (EIN) and the Environmental Information System in NEMA and give NEMA the mandate and means necessary to coordinate, standardize environmental information and to act as the central depository for environmental information;
- (iv) Promote use of ICT in information dissemination;
- (v) Strengthen environment information units within lead agencies through training and logistical support, and formally link them to the national environmental information network to be operated by the information centre;
- (vi) Document, evaluate, store, disseminate and utilize existing indigenous knowledge and practices with regards to environment and natural resource management.

3.4 Conservation of Biological Diversity, Traditional Knowledge and Natural Heritage

Uganda has one of the richest biodiversity assemblies in Africa and possesses a rich natural endowment of mountains, forests, wetlands, lakes and rivers. The conservation of biological diversity both outside and inside protected areas is a critical environmental issue because of the actual and threatened extinction of many species and the degradation of habitats. The present rate of plant and animal life depletion as a result of unsustainable socio-economic activities is alarming. Conservation of biodiversity is a form of natural resource management which has as its primary goal the maintenance of national biological resources to meet the needs and aspirations of present and future generations.

Natural heritage sites, including endemic “biodiversity hotspots”, sacred groves and landscapes, are repositories of significant genetic and ecosystem diversity, and the latter are also an important basis for eco-tourism. They are nature's laboratories for evolution of wild species in response to change in environmental conditions.

Objectives

To conserve and manage sustainably the country's terrestrial and aquatic biological diversity in support of national socio-economic development;

To protect natural heritage sites and traditional knowledge

Guiding principles

- (i) Protected Areas (PA) are the cornerstone of national efforts to protect biological diversity;
- (ii) Habitats of critical species (e.g. fish breeding grounds, wildlife dispersal areas) both within and outside the PA system require special protection to ensure their long-term survival.;
- (iii) Natural heritage sites and traditional knowledge need to be conserved and protected;
- (iv) Tourism, eco-tourism and non-consumptive biodiversity uses should be promoted as both are means of conserving biodiversity and earning income;
- (v) Pricing policies should be conducive to conserving biodiversity and sustaining natural resources; prices paid by resource users should reflect the cost of resource replacement or rehabilitation;
- (vi) Protected areas should include as wide a range of ecosystems and habitats as possible and be linked by corridors of suitable habitat along which species can disperse and survive; and
- (vii) Local community involvement in the planning and management of PAs and in sharing of benefits derived from these areas is crucial for the conservation of biological diversity.

Strategies are to:

- (i) Develop mechanisms for implementation of the National Biodiversity Strategic Action Plan including capacity building for implementation of national biodiversity targets;
- (ii) Strengthen existing legislation to bring on board protection of biodiversity outside PA;

- (iii) Develop a policy framework and guidelines for the identification and management of buffer zones and buffer areas in and around PAs to help reduce conflicts between multiple uses and users (e.g. livestock and wildlife);
- (iv) Develop a policy framework and guidelines for the identification and management of natural heritage sites, sacred groves and traditional knowledge;
- (v) Review a mechanism for collaboration between Protected Area management and the neighboring communities in order to manage potential conflicts through the involvement of local people in the planning, management and decision making process, and ensure that apportionment of benefits from the PA system is offered to the local communities;
- (vi) Promote access and benefit sharing with adjacent / neighboring communities;
- (vii) Foster public support for intended biodiversity actions and encourage private investment in biodiversity conservation;
- (viii) Re-institute methods of adoptive management and continue the process of sustainable resource management techniques, based on research results and monitoring programs;
- (ix) Strengthen links to the international biodiversity conventions, e.g., CITES, Ramsar, World Heritage Sites, etc.; and
- (x) Develop clear and implementable strategies and guidelines on management of impacts of exploration of oil and gas and other mining activities on biodiversity and human beings; and
- (xi) Develop strategies and guidelines for implementation of Biodiversity Offsets

3.5 Water Resources Management

The need for equitable use, integrated and sustainable management of the water resources is increasingly taking centre stage in national development process. Water is a major factor in the socio-economic development of Uganda. The rapid growth in population and increased agricultural and industrial production require adequate and safe water supply. Additionally Uganda's water resources are dominantly trans-boundary in nature and thus require strategic regional and international cooperation.

Objective

To manage the water resources of Uganda in a wise, integrated, sustainable and coordinated manner. .

Guiding principles:

- (i) Manage and develop the water resources in an integrated and sustainable manner;
- (ii) Management of water resources should be de-concentrated to lower levels of governance in order to systematically respond to water resources challenges and ensure that water resources effectively contribute to socio-economic development.
- (iii) The "catchment / drainage basin" should be the basic planning and development unit;

- (iv) Priority should be given to watershed management to control, conserve and regulate the water balance in the catchment regions and water courses;

Strategies are to:

- (i) Strengthen and develop national, regional and international partnerships and networks to enhance management and equitable utilization of shared water resources;
- (ii) Promote catchment based integrated water resources planning, management planning and development
- (iii) Promote stakeholders participation in water resources development and management
- (iv) Promote an integrated approach to planning and implementation of water and related activities
- (v) Promote creation of synergy and efficient use of resources;
- (vi) Develop local capacity for community management and maintenance of water catchment areas and water source points;
- (vii) Strengthen the capacity to measure and to continuously assess and monitor the quality and quantity of water resources;

3.6 Environment and Macro-economic Policy

Macroeconomic policies and sectoral policies have direct and indirect effects on environment and natural resource use. Unfortunately for Uganda, the effects of these policies on the environment are not considered and integrated in the national socio-economic development policy and planning processes. The total value of environmental resources including ecosystem services is hardly reflected in the pricing of marketed goods and services. Environment and natural resources are largely considered as free goods.

3.6.1 Environmental Accounting

A big proportion of Uganda's current and projected national income is derived from the utilization of the natural resource base (forestry, fishing, tourism, etc.) and the recent discovery of commercial quantities of Oil and Gas has raised the profile of ENR in the country's development process. Therefore, changes in the stocks of natural resources and ecosystems services affect the country's development prospects. There are growing concerns that the rapid economic growth rates have largely been achieved by the liquidation of natural capital without adequate provision for replacement of these assets for future generations. The current indicator of Gross Domestic Product (GDP) used to assess economic growth does not account for depletion or degradation of natural resources and often, it underestimates the economic contribution of the ENR sectors. GDP would appear to increase in the short run, but the economy would not be able to sustain that level of GDP in the future because of loss of the underlying assets.

It is essential to construct National Accounts, extended for the environment and natural resources including ecosystem services that properly assess the sustainability of economic growth.

Objective:

To integrate environmental costs and benefits into economic planning and development at all levels of government in order to reflect the true costs and benefits of development

Guiding principles are:

- (i) Sustainable natural resource use and environmental protection are the means to ensure that the economy has the resources necessary to enhance sustainable development;
- (ii) Environmental costs and benefits, including benefits foregone, should be included in the development planning and reporting process;
- (iii) Environmental costs and benefits should be accounted for using the best available information and methodologies given that the estimation of environmental costs and benefits is often imprecise due to lack of accurate information and uncertain monetary values of non-marketable environmental goods and services;
- (iv) Depletion or degradation of natural resources should enter the national accounts as depreciation of capital assets. Utilization of renewable natural resources beyond the capacity of the resource to renew itself should be recognized as a reduction of capital assets, rather than revenue; and
- (v) The costs and benefits, both economic and environmental, of major development activities and those which involve sensitive resource issues should be explicitly considered.

Strategies are to:

- (i) Develop capacity in environmental economics in the Ministry of Finance and Economic Planning, other line ministries and institutions, to review project proposals and resource allocation;
- (ii) Develop capacities of the MDAs including the Uganda Bureau of Statistics (UBOS) to prepare satellite environmental accounts as part of national accounting systems;
- (iii) Pilot projects on the development of national indicators and the application of environmental accounting in Uganda, within the framework of the United Nations or other guidelines on national environmental accounting;
- (iv) Structure accounting and financial management systems to facilitate analyses of benefits/achievements and costs;
- (v) Integrate environmental economics and accounting into the national development planning process; and
- (vi) Incorporate economic analysis into the EIA process as additional criteria for reviewing and approving investment programmes.

3.6.2 Correct Market Failures with Appropriate Pricing Policy

Market prices do not reflect the true social costs and benefits of resources or do not exist for some environment inputs and outputs resulting into market failures. Due to market failures, free markets fail to allocate resources efficiently among uses and over time.

Objective

To incorporate the cost of producing or maintaining natural resources into the costs incurred by (and benefits derived from) resource users through use of appropriate management mechanisms (e.g. leases, management contracts, users fees, taxes, subsidies, payment for ecosystem services, concession agreements, and similar pricing mechanisms)

Guiding principles

- (i) Government agencies should assess user's fees or taxes on natural resources whose market price does not accurately reflect the social value of the resource;
- (ii) Whenever possible, the costs of producing and/or maintaining a natural resource should be incorporated into costs and benefits of resource users; and
- (iii) Full cost pricing : For proper pricing of natural resources, the resource prices should reflect; the costs of extraction or harvesting, the environmental costs involved in extraction and the foregone future benefits caused by the use of the resource today.

Strategies are to:

- (i) Build the capacity of government agencies to establish the social values of the resources for which they are responsible;
- (ii) Operationalize policies and procedures to assess appropriate user fees or rights of access in the areas of land use, water use, sewerage use, pollution, fishing and forestry, and/ or to incorporate the costs of producing and maintaining a resource into the costs and benefits of the resource users; and
- (iii) Explore the possibility of using concessions or other mechanisms to grant exclusive rights to use specific delimited natural resources as a mechanism to both assess user fees and to incorporate the costs of resource management into the costs of the user.

3.6.3 Financial and Economic Sustainability

Objective

To mobilize increased private sector resources to achieve environmental conservation and management objectives

Guiding principles:

- (i) The responsibility for sustainable resource management should be integrated into management contracts, procurement and supply chain management, joint ventures, concessions, production sharing agreements and leases which regulate resource use by the private sector;
- (ii) Implementation strategies should focus more on establishing an appropriate economic environment to promote sustainable natural resource use; and

- (iii) Environmentally efficient production processes enhance competitiveness and profitability.

Strategies are to:

- (i) Increase the number of private sector actors incorporating sustainable development principles in their business practices;
- (ii) Develop a mechanism to reduce the implementation responsibilities and financial requirements of government agencies using appropriate national legislations and bye laws by involving local communities, NGOs and the private sector in natural resources management;
- (iii) Develop guidelines for prioritizing request for government funding in the area of natural resource management and environmental protection; and
- (iv) Mobilize private sector resources to achieve environmental conservation and management objectives, through the use of incentives, management contracts, leases, concessions, joint-ventures, and production sharing agreements.

3.6.4 Use of Economic Incentives and Disincentives to Change People's Behaviour

Objective

To ensure that individuals, groups, business and other economic entities have appropriate incentives and disincentives with regard to sustainable resource use and environmental protection

Guiding principles

- (i) Regulatory measures should be complemented by social and economic incentives and/or disincentives including pricing to influence behavior for individual or organizations to invest in sustainable environmental management;
- (ii) The enforcement responsibility of many government agencies should be reduced to a critical set of regulations which can be enforced; and
- (iii) The tax structure should provide incentives for socially desirable activities and disincentives for actions which compromise social welfare;
- (iv) The collections generated from environment and natural resource taxes, charges, fees, fines etc should be used to promote sustainable resource use and environment protection.

Strategies are to:

- (i) Develop capacity in the use of economic instruments for environmental management at national, sectoral and local levels;

- (ii) Develop the capacity to analyze the impact of user fees, incentives and disincentives in government agencies responsible for natural resource management, policy formulation and regulation;
- (iii) Improve the capacity of the tax administration at national and local levels to effectively collect environment and natural resource taxes and to handle the proposed tax deductions;
- (iv) Develop a programme to offer land users a reduction on their land or property taxes for SLM practices (soil and water conservation methods, agro forestry techniques, good husbandry practices, development and maintenance of tree plantations or woodlots, or use of appropriate livestock stocking rates)

3.6.5 Payment for Ecosystem Services (PES)

Well-functioning ecosystems provide reliable and clean flows of water, productive soil, relatively predictable weather, carbon sequestration and many other services essential for human well-being. Today, however, many ecosystems and the services they provide are under increasing pressure. People, companies, and societies rely on these services for raw material inputs, production processes, and climate stability. At present, however, many of these ecosystem services are either undervalued or have no attached financial value at all.

The major types of ecosystem services that have been sold to date include: Forest protection (particularly for carbon storage and sequestration); Wetlands conservation (particularly for water storage and purification, flood control and micro-climate moderation); Watershed protection (including soil protection); Species, habitat, and biodiversity conservation.

Objectives:

To offer economic incentives to foster more efficient and sustainable use of ecosystem services

Guiding Principles:

- (i) Demand for ecosystem services is clear and financially valuable to one or more players;
- (ii) Specific resource management actions have the potential to address supply constraints;
- (iii) Maintain or enhance specific ecological structures and functions beyond what would have happened in the absence of payment;
- (iv) Remain accountable to independent verifiers(if a buyer requires) to ensure that the “service” being paid for is indeed being delivered;
- (v) Adjacent communities responsible for the conservation, and also who bear the burden of degradation effects, should receive incentives in terms of compensation particularly for the critical role they play in this process.

Strategies:

- (i) Establish PES policy, legislative and regulatory frameworks responsive to the needs of the communities;
- (ii) Establish PES guidelines and enterprise support centres for advisory and capacity-building services;
- (iii) Engage and train prospective sellers, as well as financial institutions up to the community level for efficient delivery of payments;
- (iv) Provide a conducive environment for a public-private partnership for PES deals to flourish;
- (v) Establish effective governance and secure tenure to local ecosystem managers to ensure right and authority to manage ecosystems and benefit from the payments; and
- (vi) Create mechanisms for valuing or at least measuring services that are not currently valued in the market.

3.6.6 Biodiversity Offsets

Biodiversity offsets are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken. The goal of biodiversity offsets is to achieve no net loss and preferably a net gain of biodiversity on the ground with respect to species composition, habitat structure, ecosystem function and people's use and cultural values associated with biodiversity.

Objectives:

- (i) To develop, test and disseminate good practice on biodiversity offsets and to demonstrate, through a portfolio of pilot projects in a range of contexts and industry sectors, that biodiversity offsets can deliver improved and additional conservation and business outcomes than have often resulted in the context of development projects to date.
- (ii) Work with local communities, NGOs and government agencies involved in conservation and land-use planning, to demonstrate that developers can implement biodiversity offsets that enhance local communities' use and enjoyment of biodiversity,
- (iii) Deliver prioritized, targeted and cost-effective biodiversity conservation outcomes for the long term, and help companies manage their risks, liabilities and costs.

Guiding Principles

- (i) No net loss: A biodiversity offset should be designed and implemented to achieve in situ, measurable conservation outcomes that can reasonably be expected to result in no net loss and preferably a net gain of biodiversity.
- (ii) Additional conservation outcomes: A biodiversity offset should achieve conservation outcomes above and beyond results that would have occurred if the offset had not taken place. Offset design and implementation should avoid displacing activities harmful to biodiversity to other locations.
- (iii) Adherence to the mitigation hierarchy: A biodiversity offset is a commitment to compensate for significant residual adverse impacts on biodiversity identified after appropriate avoidance,

minimization and on-site rehabilitation measures have been taken according to the mitigation hierarchy.

- (iv) Landscape context: A biodiversity offset should be designed and implemented in a landscape context to achieve the expected measurable conservation outcomes taking into account available information on the full range of biological, social and cultural values of biodiversity and supporting an ecosystem approach.
- (v) Stakeholder participation: In areas affected by the project and by the biodiversity offset, the effective participation of stakeholders should be ensured in decision-making about biodiversity offsets, including their evaluation, selection, design, implementation and monitoring.
- (vi) Equity: A biodiversity offset should be designed and implemented in an equitable manner, which means the sharing among stakeholders of the rights and responsibilities, risks and rewards associated with a project and offset in a fair and balanced way, respecting legal and customary arrangements. Special consideration should be given to respecting both internationally and nationally recognized rights of indigenous peoples and local communities.

Strategies:

- (i) Promote compensation for the biodiversity values (species, habitats or ecosystems) that is impacted through development.
- (ii) Promote restoring or rehabilitating degraded areas or trans-locating biodiversity components;
- (iii) Promote protection of threatened areas
- (iv) Promote establishment of buffer zones in affected areas
- (v) Promote improvement of habitat connectivity and secure species corridors
- (vi) Promote voluntary biodiversity offsets

3.7 Strategic Environmental Assessment (SEA)

The aim of Strategic Environmental Assessment (SEA) is to protect the environment and promote sustainable development. SEA also helps further the Johannesburg Plan of Implementation agreed at the World summit on Sustainable Development in 2002, which stressed the importance of “strategic frameworks and balanced decision making for advancing the sustainable development agenda”.

Objectives:

- (i) To promote Strategic Environmental Assessments (SEA) for initiated government policies, plans, programmes and private sector investments;*
- (ii) To facilitate public participation in Strategic decision making*

Guiding principle:

- (i) Integration of Environmental considerations/concerns into Policies, Plans and Programmes at earliest appropriate stages of decision making; and

- (ii) Integrate the principles of sustainable development into country policies and programme and reverse the loss of environmental resources; and
- (iii) Integration of SEA in private sector investments

Strategies are to:

- (i) Ensure policies, plans and programmes, with likely negative consequences on the environment undertake SEA with the aim of improving or changing strategic decision making;
- (ii) Incorporate SEA into the revision of National Environment Act and other related legislations;
- (iii) Develop SEA regulations and finalize the draft SEA guidelines;
- (iv) Create awareness among decision-makers in government ministries, departments and agencies and the private sector on SEA;
- (v) Build capacity of relevant institutions and environmental practitioners for carrying out and implementing SEA in Uganda; and
- (vi) Strengthen Environmental governance that is institutional capacities for Environmental management.

3.8 Environmental Impact Assessment (EIA)

Development activities and landuse practices have impacts on the environment and therefore their assessment and evaluation is essential. Although Environmental Impact Assessment (EIA) is not entirely new in Uganda, its use has not yet been fully understood and appreciated by policy makers and resource users. The low cost of preventing environmental damage compared to the high cost of repairing such damage is a sound economic justification for instituting and carrying out EIAs.

Objective:

To provide a system of Environmental Impact Assessment (EIA) and environmental monitoring so that adverse environmental impacts can be foreseen, eliminated or mitigated.

Guiding Principles:

- (i) Public and private sector development options should be environmentally sound and sustainable;
- (ii) EIAs should consider not only biophysical/environmental impact but address the impact of existing social, economic, political and cultural conditions;
- (iii) Environmental Impact Statements (EISs) should be required for all activities where the EIA has determined a negative environmental threshold;
- (iv) Environmental Audits (EAs), including inspection and record keeping, should be required for activities as might be determined by the EIS; and

Strategies are to:

- (i) Strengthen EIA regulations for all private and public development projects;

- (ii) Strengthen EIA capacity in lead agencies; and
- (iii) Strengthen assessments of social, economic, political and cultural conditions (ESIA) impacts.

3.9 Control of Pollution and Management of Domestic & Industrial Wastes

Economic activities of industrial production, mining, agriculture, health, transport and education services, among others, are the main sources of pollution in the country. Environmental standards and laws on pollution management are still inadequate and / or non-existent in some areas. In addition, Uganda like most other developing countries does not yet have in place adequate waste disposal facilities.

Objective:

To control pollution of the environment, and promote environmentally sound management of domestic and industrial wastes.

Guiding Principles:

- (i) Discharges of substances that can be harmful should be minimized and where possible prevented;
- (ii) Pollution minimization and prevention should be a multi sectoral undertaking but coordinated by a single agency preferably NEMA;
- (iii) The 'Polluter pays' principle should be adopted whereby polluting industries and municipalities pay a fee based on the location, nature, volume and chemical composition of the effluent which they discharge and institute mechanisms to ensure that such proceeds are ploughed back to environment conservation.;
- (iv) Clear linkages to other sectoral policies including those on water resources, human settlements, health and disaster prevention and preparedness, should be established; and

Strategies are to:

- (i) Strengthen cleaner production methods, awareness, low waste production systems, engineered natural systems, reclamation, prevention, reduction, re-use and recycling;
- (ii) Control or mitigate the environmental impacts of the different waste disposal methods;
- (iii) Develop / adopt appropriate technologies for waste management;
- (iv) Establish and review environmental standards for permissible levels of pollution;
- (v) Strengthen institutional and technical capacities for waste management and enhance institutional coordination;
- (vi) Develop and institute specific safety and health codes of practice and guidelines based on the hazard levels of various industry types;
- (vii) Strengthen the compliance monitoring system and capacity for water, land and air pollution control standards and regulations;

- (viii) Enforce safe limits for the location of water wells, boreholes and dams in the vicinity of major sanitary landfill sites;
- (ix) Prescribe minimum standards of environmental safety of mining operations, including the development of mine contingency plans;
- (x) Enforce procedures for the reclamation and restoration of land, top soil and vegetation of mined out areas and monitor the recovery of such areas;
- (xi) Enforce regulations for the disposal of mine tailings and dumps in approved sites; and
- (xii) Maintain regular environmental audits to ensure the adoption of environmentally sound practices

3.10 Management of Electronic, Hazardous Chemicals and Materials Wastes

The waste profile in Uganda is increasingly becoming complex with new additions of electronic waste, radioactive waste, plastics and polythene materials, industrial wastes and medical wastes and traditional organic wastes (NDP, 2010). The poor disposal of e-waste and hazardous / toxic waste from industries; urban areas and hospitals among others have put the health and livelihoods of thousand of inhabitants at risk.

Objective:

To control pollution of the environment, and promote environmentally sound management of e-waste and other hazardous materials.

Guiding principles:

- (i) Disposal of e-waste and other hazardous / toxic materials should be done in a safe and environmentally friendly manner;
- (ii) Clear linkages to other sectoral policies including those on water resources, human settlements, and health should be established; and
- (iii) Adequate regulation of e-waste and other hazardous / toxic materials should be established and enforced.

Strategies:

- (i) Formulate clear guidelines on the safe handling and disposal of e-waste in line with the provisions of the available laws and policies on e – waste and maintain an up-to-date register of e-waste, toxic/ hazardous and radioactive substances.
- (ii) Develop efficient and safe systems for e-waste disposal, putting in place effective supervision and enforcement of the laws and policies on e-waste;
- (iii) Promote establishment of regional centres for e-waste and hazardous materials management (collection centres, recycling plants, re-use facilities and incinerators);

- (iv) Promote e-waste and hazardous materials reduction, recycling and re-use especially through PPP framework;
- (v) Strengthen the national strategy and standards on medical waste management and disposal;
- (vi) Develop and strengthen technical capacity for the monitoring and control of hazardous materials and prepare environmental guidelines/ legislation for the management of hazardous waste installations;
- (vii) Promote science and technology innovation capacities in clean and environmentally sound technologies for waste management.

3.11 Sound Management of Chemicals

Comprehensive chemicals management frameworks include measures for managing chemicals at every step of their life-cycle – from production to disposal – as well as the promotion of innovative approaches for chemicals management by every stakeholder. The Strategic Approach to International Chemicals Management (SAICM - 2006) was established with the aim of meeting the World Summit Sustainable Development (WSSD) 2020 goal. The WSSD development goal is “to ensure that by 2020, chemicals are produced and used in ways that minimize significant adverse effects on the environment and human health”.

Objectives:

To promote life cycle approach for chemical management, from production to disposal

Guiding principles:

- (i) Strengthened legislative and institutional framework for chemical management;
- (ii) Socio-economic gains for sound management of chemicals; and
- (iii) Strong inter-sectoral and multi-sectoral collaboration mechanism for sound management of chemicals.

Strategies:

- (i) Promote the sound management of chemicals and hazardous wastes in accordance with agreed international frameworks;
- (ii) Integrate comprehensively Sound chemical management into National environment Act and related legislations;
- (iii) Development regulations and appropriate guidelines for chemical management in such sectors where there is need;
- (iv) Domesticate chemicals and chemical waste Multi-lateral Environmental Agreements;
- (v) Mainstream chemicals into National Action Planning and National Budgetary processes;
- (iv) Promote private sector financing and economic instruments especially administrative cost recovery mechanisms;

3.12 Climate

Climate is a vital natural resource necessary for socio-economic development. The influence of climate variability on agricultural production, among others, cannot be over-emphasized. Given the high proportion of the country's population that depends on rain-fed agriculture, the country's livelihoods and food security are particularly vulnerable to the effects of climate change.

Objective:

To monitor the country's climate and atmosphere to better guide land-use, aviation safety and economic development

Guiding Principles:

- (i) Climate is a vital natural resource which should be properly harnessed for socio-economic development;
- (ii) The utilization of the climate and atmospheric information is critical in aviation safety, agriculture and the efficient management of the environment;
- (iii) Resource users (particularly farmers) should be involved in the monitoring and dissemination of climatic information;
- (iv) The promotion of international cooperation for smooth exchange of climatic information and control of transboundary atmospheric air pollution is important in the management of the resource; and
- (v) Access to climatic data/information should be guaranteed on terms determined by the relevant authority.

Strategies are to:

- (i) Improve coordination and exchange of meteorological information among various stakeholders;
- (ii) Strengthen, revamp and create new national meteorological monitoring networks and data processing capabilities;
- (iii) Improve awareness among potential users and decision makers of climatic and atmospheric information;
- (iv) Strengthen the infrastructure and manpower for climate, meteorology and meteorological studies;
- (v) Strengthen the Early Warning Information System for effective disaster preparedness and response to extreme climatic events or accidental hazardous emissions into the atmosphere; and
- (vi) Strengthen national, regional and global cooperation to take full advantage of climate and weather management facilities available.

3.13 Climate Change and Weather Variability

It is universally accepted that climate change is one of the greatest challenges facing humanity this century. Uganda's sustainable development largely depends on utilization of its environment and natural resources. However, the increasing degradation of these resources coupled with increasing climate variability and climate change is beginning to have a serious negative impact on Uganda's social and economic development and the livelihoods of its people (NDP, 2010).

Objective:

To ensure that all stakeholders harmoniously address climate change impacts and their causes through appropriate adaptation and mitigation measures.

Guiding Principles:

- (i) Promote the development and adoption of an integrated approach to address the effects of climate change;
- (ii) Re-define climate change as a development issue;
- (iii) Mainstream climate change in all development policies; programs and projects;
- (iv) Provide and promote incentives for Clean Development Mechanisms (CDMs);
- (v) Promote effective response to climate change induced disasters; and
- (vi) Promote implementation of climate change conventions;

Strategies are to:

- (i) Develop institutional capacities for climate change management in Uganda;
- (ii) Strengthen resilience and adaptive capacity to climate induced hazards and natural disasters;
- (iii) Integrate climate change adaptation and mitigation into national strategies and plans;
- (iv) Strengthen education, awareness raising on climate change mitigation, impact reduction, and early warning;
- (v) Strengthen advocacy and mobilization of human and financial resources to address climate change;
- (vi) Develop strategies for the transfer, acquisition and adaptation of relevant technologies to alleviate the pressure on fragile ecosystems and natural resources and contribute to mitigation of climate change;
- (vii) Develop and implement a capacity building program for climate change induced disaster prevention and response at national, local and community levels;
- (viii) Support Development and implementation of catchment based management and restoration plans;
- (ix) Support mapping out climate disaster prone areas to guide adaptation and mitigation efforts;
- (x) Support scaling up of ecosystem based adaptation (EBA) to climate change; and
- (xi) Develop and implement mechanisms for harnessing opportunities for carbon financing.

3.14 Biosafety and Biotechnology

Biotechnology has been used in Uganda for many years by several industries to process wine and beer, in the production of cheese and yogurt, leavening bread and extraction of cobalt. However, modern biotechnology which involves the use of genetic engineering technique to transfer useful characteristics creates enormous opportunities for agriculture development, industrialization and environment protection. However, there is need for precautionous use and adoption of biotechnology to contain negative impacts associated with its use.

Objectives:

To ensure that biotechnology activities / technologies are undertaken in a manner that conserves the environment and biodiversity; and

To promote biosafety.

Guiding Principles:

- (i) Measures to ensure that the development, handling, transport, use, transfer and release of any living modified organisms are undertaken in a manner that prevents or reduces the risks to environment, natural resources and human health;
- (ii) Promote identification of living modified organisms or specific traits which may have adverse effects on the conservation and sustainable use of the environment, natural resources and risks to human health and take measures to treat such living modified organisms or specific traits; and

Strategies:

- (i) Ensure the Biosafety Bill contains stringent precautionary principles;
- (ii) Expedite the enactment of the Bio-safety Policy and the accompanying laws / regulations;
- (iii) Develop / build research capacity in biosafety and biotechnology in the relevant sectors;
- (iv) Promote a cautious pursuance of GMOs in agriculture;
- (v) Promote in depth research and ESIA before taking on GMOs; and
- (vi) Evaluate Bio-fuels and their effects on food security;

3.15 Population, Health and Human Settlements

While the environment provides the resource base necessary for nurturing and sustaining the human population, man's activities and needs greatly affect and influence the quality of the environment. The high population growth rate and dependent population require an efficient and sustainably managed environment. It is therefore prudent to balance population growth, agricultural productivity and environmental quality.

Objective:

To effectively plan for population growth, settlements, distribution and health in such a way as to match people and resources in an economically productive, socially acceptable and environmentally sound manner

Guiding principles:

- (i) National population policy should emphasize the fundamental role of women and the relationship of population to other environmental issues;
- (ii) District and local plans and development activities should incorporate population, health and human settlement concerns ; and
- (iii) An approach to human settlements which balances man-made and natural resources should be encouraged and promoted to achieve a healthy and sustainable habitat for human beings.

Strategies are to:

- (i) Increase access to family planning and maternal and child health care programs, targeting both men and women;
- (ii) Develop and promote the wider application of appropriate technologies for infrastructural development such as building materials, energy production and use, and water supply and sanitation/ hygiene facilities (e.g. prefabricated materials, recycling of solid waste, improved cooking stoves, and recycling of waste for agricultural and industrial use;
- (iii) Expedite rural and urban land use planning/ urban renewal for integrated and sustainable rural and urban development and improved environmental quality;
- (iv) Promote income generating programs and incentives which aim at the alleviation of poverty and adoption of environmentally friendly technologies especially among vulnerable and lower income groups; and

3.16 Gender Integration

It is essential to analyze and understand the relevance and implications of gender roles in environmental and natural resource management. The exclusion of women, at various levels of decision making, project design and implementation, is probably contributing significantly to the degradation of environmental resources.

Objective:

To integrate gender concerns in environmental policy planning, decision making, and implementation at all levels to ensure equitable sustainable social and economic development

Guiding principles:

- (i) Collection and analysis of gender disaggregated data should be a first priority given the need of such information for effective environmental management;
- (ii) Popular participation and public education should include both men and women;
- (iii) Gender analysis should show the impacts of a proposed program or policy would affect men and women differently;
- (iv) Basic training in environmental and natural resources management should include methodologies and tools for gender analysis;
- (v) Basic research on gender roles should be carried out throughout the country.

Strategies are to:

- (i) Integrate gender concerns in existing and proposed sectoral policies, programs and projects;
- (ii) Facilitate participation of both men and women in formal and informal education, training, public awareness campaigns and decision making in environmental and natural resource management;
- (iii) Strengthen institutional mechanism to review existing and proposed programs to integrate gender issues; and
- (iv) Carry out research on the local knowledge and use of natural resources taking into account gender issues.

3.17 Environmental Education and Human Resource Development

Environmental education and public awareness is an essential component of sustainable development and environmental protection. To ensure that the population is fully involved in environmental planning and management, there is need to draw up and implement a comprehensive environmental education and public awareness program.

Objectives:

- (i) To increase awareness and understanding among the policy makers and the public of the need for sustainable environmental management; and*
- (ii) To build capacity of relevant stakeholders needed to implement environment and natural resource management programs. in environmental and natural resource management programs.*

Guiding Principles:

- (i) Integrate Environmental education into ongoing school curriculum and other education programmes;
- (ii) Environmental education and public awareness programs should be targeted to all those in public and private sectors whose activities significantly affect the environment;

- (iii) Train and promote mindset change to strengthen environmental management.;
- (iv) Institutional and / or individual awareness and capacity should be increased to improve future ability to evolve with and provide for a sustainable income under increasing land and resource pressure;

Strategies are to:

- (i) Strengthen the national strategy for carrying out public awareness through formal and informal environmental education programs for the public and private sector, especially policy makers, politicians, administrators, bankers, industrialists, transporters, farmers and all other natural resource use;
- (ii) Develop new and update existing environmental teaching materials for all training institutions;
- (iii) Train trainers in the use of environmental education materials, for example teacher trainers
- (iv) Make environmental education mandatory in all formal education institutions;
- (v) Strengthen existing higher level institutions to offer more programs tailored to produce environmental economists, planners, trainers, lecturers, lawyers and enforcement officers; and
- (vi) Strengthen in-service training in specialized areas such as environmental planning, economic, law, information systems, impact assessment, pollution control and waste management.

3.18. Public-Private Sector Partnerships and Public Participation in Environment Management

Conservation of the environment requires the participation of multiple stakeholders, who bring on board their respective resources, competencies and perspectives. Co-operation between the public and private sectors in form of public-private sector partnerships (PPP) can be a powerful incentive for improving the quality and efficiency of public services, and a means of for improving environmental and management and infrastructure financing. Participation of the public in resource management and environment protection is intended not only to enlist their support but also to influence change in behavior and attitudes and act as an incentive to sustainable resource use and management.

Objectives:

- (i) To promote increased involvement of the private sector in the implementation of the NEMP;*
- (ii) To involve environment and natural resource users in environmental planning, implementation, monitoring and evaluation at all levels; and*
- (iii) To bring resource management decisions and accountability closer to ENR users;*

Guiding principles:

- (i) Promote resource user cooperation and participation in all phases of environmental planning, implementation, monitoring and evaluation;
- (ii) Resource users should be assisted in identifying untapped resources and mobilized to utilize them;

- (iii) Benefit sharing and co-management

Strategies are to:

- (i) Support and operationalize frameworks for PPP in the management and development of ENR goods and services;
- (ii) Support increase in the share of private sector actors incorporating sustainable development principles in their business practices;
- (iii) Support broad based multi-stakeholder partnerships with CSOs, the private sector, Local Governments and MDAs that mobilise; knowledge, expertise, technologies and financial resources to achieve Sustainable Development;
- (iv) Increase the share of private sector actors incorporating sustainable development principles in their business practices;
- (v) Increase public education and awareness on the contribution of a clean and healthy environment to national development;
- (vi) Strengthen extension programs in natural resources management in partnership with CSOs and private sector;
- (vii) Strengthen opportunities for public participation in natural resource management, including co-management, PPP and benefit sharing in protected areas and private land; and
- (viii) Ensure integrations of environmental management aspects in the PPP bill and private sector led developments/projects.

3.19 Disaster Risk Reduction & Management

Environment and disasters are inherently linked. Environmental degradation exacerbates the impact of natural disasters. It affects natural processes, alters humanity's resource base and increases vulnerability. The degree to which environment can absorb impacts, increase overall resilience and provide effective and economical solutions to reduce disaster risks are therefore jeopardized. Furthermore, societies' traditional coping strategies are challenged. Disaster Risk Reduction (DRR) and management aims at reducing vulnerability due to natural and human – induced hazards and represents an important development in both disaster management and sustainable development paradigms.

Objectives:

- (i) To minimize vulnerabilities and disaster risks throughout the country;
- (ii) To avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development; and
- (iii) To enable societies at risk to become engaged in the conscious management of risk and the reduction of vulnerability

Guiding Principles:

- (i) Investments in environmental management and sustainable development contribute to DRR;
- (ii) Integrated approaches to environmental management incorporate disaster risk reduction in the framework of environmental management and development plans;

(iii) Local communities are facilitated to better manage their environment / natural resources; and

Strategies are:

- (i) Promote multi-sector and inter-disciplinary approach to DRR and Management at the local, regional and national levels;
- (ii) Develop strategic capacity in Disaster Risk Reduction and Management (DRRM);
- (iii) Strengthen /improve Early Warning Systems/Units in all relevant sectors;
- (iv) Promote restoration and rehabilitation of sensitive / disaster prone areas / ecosystems;
- (v) Mainstream Disaster Preparedness, Reduction & Management issues into all development programmes and projects;
- (vi) Promote afforestation especially on mountain slopes and fragile areas;
- (vii) Strengthen the capacity of Disaster Reduction & Management Committees at district level;
- (viii) Support Development and implementation of catchment based management and restoration plans;
- (ix) Enhance capacity of government, private sector and CSOs for disaster preparedness and management;

CHAPTER 4: SECTORAL POLICY GOALS, OBJECTIVES AND STRATEGIES

Sectoral Policy Goals, Objectives and Strategies

Day-to-day implementation of environmental management activities will, for the most part, be carried out by sectoral ministries, departments and other public and private sector institutions. Each ministry/institution will operate under sectoral policies developed within the framework of the cross-sectoral policies described above.

In reference to cross-sectoral policies, the following suggested sectoral objectives and strategies have been prioritized using three criteria: (i) the magnitude or urgency of the problem the policy is to address;; and (ii) the policy's potential for solving the problem; (iii) the potential contributions of the policy to the economy and social well being.

4.1 Agriculture and Farming Systems

Agriculture has the potential to significantly increase its contribution to economic growth and poverty reduction. However, the high population growth rate and poor agricultural practices have put severe stress in this sector and consequently on the environment.

Objectives:

- (i) To promote farming systems and agricultural practices that conserve and enhance land productivity in an environmentally sustainable manner;*
- (ii) To sustainably raise factor productivity (land, labour, capital) in crops, livestock, and fisheries;*

Guiding principles:

- (i) Increased agricultural production and productivity should be based on improved farming systems and security of land tenure, rather than on expansion of agricultural land;
- (ii)** Incentives should be considered as a viable mechanism to promote and implement sustainable land management (SLM) practices.
- (iii)** Integration and building synergies on the MEAs and regional obligations

Strategies are to:

- (i) Expedite updating the soils information /national soils survey and mapping and formulation of a National Soils Policy;
- (ii) Promote Sustainable Land Management (SLM) practices;
- (iii) Promote climate-smart agriculture to increase farm productivity and incomes, and make agriculture more resilient to climate change;

- (iv) Improve early warning systems and support development and promotion of research technologies that combine optimum land production, resource conservation and sustainable livelihoods;
- (v) Develop and enhance sustainable value chain within crop, livestock and fisheries.

4.2 Invasive and Alien Species (IAS)

Alien species which are non-indigenous but introduced in the country by accident or intentionally as ornamentals, have brought about changes that are harmful to ecosystems, biodiversity, health, economic or other aspects of human life. On the open water bodies, water hyacinth, water lilies and other species are a major environmental problem. Additionally indigenous species have also become invasive due to changes in land management and accelerated land degradation. In rangelands *Acacia hockii* and *Senegal sp*, *Lantana camara*, and other species have expanded and cover extensive areas, especially in the cattle corridor. Important to note that *Lantana camara* is a good habitat for tsetse flies. Some of these species were in the past controlled/managed by strong and well managed fires.

Objective:

To eradicate or appropriately manage species that show a tendency to spread out of control in aquatic or terrestrial ecosystems

Guiding principles:

- (i) Early detection and implementation of an integrated control program;
- (ii) Effective control, monitoring and surveillance; and
- (iii) Involvement of local community in the management of invasive and alien species.

Strategies are:

- (i) Strengthen measures to regulate and control the introduction of alien and invasive species
- (ii) Develop appropriate legal principles, approaches and tools for dealing with IAS;
- (iii) Strengthen the control and detection of invasive species;
- (iv) Develop clear and implementable integrated strategies for eradication /management of invasive species;
- (v) Promote research and profiling of alien and invasive species on land and water ecosystems.

4.3 Forest Resources Management

Although Uganda is endowed with a rich diversity of forestry resources, these resources are highly threatened by over exploitation and inadequate implementation of policies and laws. Uganda's Tropical Forests are among the most biologically diverse ecosystems on earth, and the conservation of this diversity within the country's gazette tropical forest reserves is of high national and international priority. The recommended level of national forest cover for Uganda

to have a stable ecological system is 30 per cent (NDP, 2010). Uganda's forests provide a wide range of environmental and values such as the amelioration of climate, stabilization of soils and steep slopes etc which are critical to national development.

Objectives:

- (i) To achieve sustainable increase in the economic, social and environmental benefits from forests and trees by all the people of Uganda, especially the poor and vulnerable.*
- (ii) To sustainably manage forest and forest resources in Protected Areas, public and private land; and*
- (iii) To promote increased forest production by the private sector and communities.*

Guiding Principles:

- (i) The forest areas that are critical water catchment areas, must continue to receive high protection priority in order to sustain economic development activities;
- (ii) Involvement of local community in the planning and management of Protected Areas (PA) and in the sharing of benefits derived from these areas;
- (iii) Private forestry should be encouraged by appropriate incentives, extension services, marketing assistance and increased security of land and tree tenure; and

Strategies are to:

- (i) Promote the sustainable management of forestry resources so that they continue to provide services while supporting the sustainable development needs of the country and communities;
- (ii) Promote restoration of degraded natural forests on protected and private land;
- (iii) Support re-forestation; afforestation; planting of woodlots; and tree planting especially on slopes and fragile areas as a measure for disaster risk reduction (DRR);
- (iv) Strengthen the development and implementation of integrated Forest Management Plans (FMPs) with active participation of communities;
- (v) Strengthen the implementation and enforcement of the existing forest legislations;
- (vi) Support communities to enhance their livelihoods and incomes from Forests and trees and promote user rights as an incentive for the conservation of the forest resources;
- (vii) Enhance detection and control mechanisms for Invasive and Alien species; and
- (viii) Ensure large biomass consumers develop commercial forest plantations and promote out growers schemes.

4.4 Wetland Resources Management

Wetlands are critical part of the environment and one of the important natural resources. Through their ecological values and functions, wetlands invariably contribute to the health of the environment and socio-economic development of the country. They have high biodiversity values and provide ecological services such as habitat for wildlife (including migratory birds) and fish breeding grounds. However,

wetlands are currently threatened with degradation as a result of being drained mainly for agricultural production, settlements/urbanization, brick making, sand mining and industrial expansion.

Objectives

To promote the conservation of wetlands to sustain their ecological and socio-economic functions for the well-being of the people

Guiding principles

- (i) Wetlands are important and productive natural resource systems which should be sustainably managed;
- (ii) Wetlands store enormous amount of water and provide buffering capacity against pollution, flooding and siltation;
- (iii) Wetland resources management guidelines should be developed in a participatory manner and widely disseminated to all stakeholders ;
- (iv) Wetlands identified as having a significant national and international biodiversity value should be fully protected;
- (v) Any wetland providing critical function such as source of water supply and / or an “effluent filter” should be protected from encroachment; and
- (vi) Traditional uses of wetland resources by communities, guided by bye-laws compatible with national guidelines and policy, should continue.

Strategies are to:

- (i) Protect, restore and maintain the integrity of wetland ecosystems and conserve the biodiversity value of wetlands;
- (ii) Strengthen development and implementation of guidelines and plans to promote the conservation and wise use of wetland resources;
- (iii) Develop and implement appropriate wetlands management and action plans;
- (iv) Improve the appropriateness of policy, legal, regulatory and institutional frameworks;
- (v) Develop and maintain capacity for wetland management at Central and Local Government levels;
- (vi) Promote long-term wetland conservation and restoration of degraded wetlands to provide global services, while supporting the sustainable development needs of the country and communities ;
- (vii) Promote transboundary co-operation for sustainable management of wetlands and gazette wetlands of significant biological diversity;
- (viii) Promote/undertake economic valuation of wetlands resources to aid decision making; and
- (ix) Strengthen the mapping, demarcation and gazettement of wetlands.

4.5 Hilly and Mountainous Ecosystems

Hilly and mountainous ecosystems, riverbanks and Lakeshores are fragile and vulnerable environments. They are home to numerous isolated and threatened animals, birds and plant species. The Convention on Biological Diversity (CBD) recognizes that mountain ecosystems often support high-risk biological populations. These ecosystems have become isolated habitats at higher risk of damage/degradation from global climate changes and human activities including: deforestation, illegal logging; drainage and grazing; waste disposal; human settlements, among others at an accelerated and alarming rate. Mountain ecosystems play a key role in providing forest cover, feeding perennial river systems, conserving genetic diversity, and providing an immense resource base for livelihoods.

Objectives:

- (i) To facilitate the conservation and sustainable management of resources in mountainous and hilly areas; and
- (ii) Promote alternative livelihoods for communities in these fragile ecosystems.

Guiding Principles:

- (i) Hilly and Mountainous areas are “*Water Towers*” and source of water for social wellbeing and economic development activities-hence the need to protect them;
- (ii) Hilly and Mountainous areas are repositories of biodiversity “*Hot Spots*” and provide food, energy, Non-timber forest products (NTFP) etc –hence the need to conserve them;
- (iii) Alternative livelihood opportunities for the poor and vulnerable communities reduces pressure on fragile ecosystem.

Strategies:

- (i) Protect, restore and maintain the integrity of mountainous and hilly areas and conserve their biodiversity values;
- (ii) Develop and implement appropriate management plans and action plans;
- (iii) Promote enforcement of guidelines and regulations on mountainous and hilly areas; and
- (iv) Support the development of alternative livelihood opportunities for poor and vulnerable communities dependent on these fragile ecosystems to enhance their protection and conservation.

4.6 Riverbanks and Lakeshores

River banks and lake shores are sensitive / fragile ecosystems with important environmental functions. They play a very vital role in water storage and purification, flood control and micro-climate moderation. However they are currently undergoing / experiencing extensive degradation due to increased human pressure / activities. These activities include, among others, human settlements, sand mining, brick making, dumping of wastes, drainage for agricultural activities/ use etc.

Objectives:

- (i) To facilitate the conservation and sustainable management of resources in river banks and lake shores ecosystems; and

- (ii) To promote the integration of wise use of resources in these fragile and vulnerable ecosystems;

Guiding Principles:

- (i) Riverbanks and lakeshores are natural “filters” that protect and regulate the quality and quantity of water in rivers and lakes – hence the need to conserve them;
- (ii) Riverbanks and lakeshores attenuate floods (reduce negative impacts of floods) - hence the need to conserve them;
- (iii) Riverbanks and lakeshores are fish breeding grounds that require conservation / protection.

Strategies:

- (i) Promote enforcement of guidelines and regulations on river banks and lake shores;
- (ii) Support the development of alternative livelihood opportunities for poor and vulnerable communities dependent on these fragile ecosystems to enhance their protection and conservation; and
- (iii) Promote alternative livelihood opportunities for the poor and vulnerable communities to reduce pressure on fragile ecosystem.

4.7 Wildlife Conservation and Management

Uganda is well endowed with a diversity of animal and plant species. However, over the years, the status of wildlife resources has become threatened with extinction and degradation mainly as a result of inadequate implementation and enforcement of policies and laws, poor management, poaching and illegal trade in endangered species.

Objective

To conserve and sustainably manage wildlife resources in Protected Areas, public and private lands.

Guiding Principles

- (i) Uganda’s wildlife resources are among the most biologically diverse on earth, and the protection of these resources within the country’s PA system is of high national and international priority;
- (ii) The concept of wildlife conservation and management should underscore the importance of biological diversity at the species, genetic, and ecosystem levels;
- (iii) Protected areas should include as wide a range of ecosystems and habitats as possible and be linked by corridors of suitable habitat along which species can disperse and survive;
- (iv) Local community involvement in the planning and management of PAs and in the sharing of benefits derived from these areas is crucial for the conservation of wildlife resources; and
- (v) EIA should be required for any activities which might affect wildlife resources, both inside and outside the PA system;

Strategies are to:

- (i) Strengthen the implementation and Enforcement of the existing wildlife legislations;
- (ii) Develop and implement fire management plans in wildlife conservation areas;
- (iii) Enforce compliance to environmental laws, SEA, EIAs, Audits and monitoring; and
- (iv) Strengthen integrated cross boarder management systems/mechanisms;
- (v) Strengthen collaborative management of PAs;
- (vi) Promote private investments in wildlife farming.

4.8 Livestock and Rangeland Management

Although livestock and rangelands play an important role in national socio-economic development, over grazing, poor stocking methods, inadequate disease control and social and cultural practices, among others, have greatly contributed to the general decline in these sectors. Current production levels in the sub-sector cannot meet the domestic and regional demand. Good potentials and opportunities for production and marketing exist in; dairy and meat; hides, skins and leather; apiculture and sericulture.

Objectives:

- (i) To sustainably raise factor productivity (land, labour, capital) in livestock; and*
- (ii) To manage the nation's rangelands within the carrying capacity of the land to support both livestock and wildlife development.*

Guiding principles

- (i) Management of grazing areas should be based on recommendations of rangeland carrying capacities;
- (ii) Policies for Rangeland/livestock and wildlife management should be closely coordinated and harmonized; and
- (iii) Wildlife ranching should be considered as a financially and ecologically viable supplement to livestock ranching in some areas of Uganda.

Strategies are to:

- (i) Control diseases, pests and vectors;
- (ii) Increase supply of water for production (water for livestock and wildlife);
- (iii) Develop a policy on the management of rangelands and the resources there in;
- (iv) Promote the integration of crop- livestock farming systems as well as the use of climate change resilience technologies;
- (v) Enhance control and detection mechanisms for Invasive and Alien species (IAS);
- (vi) Ensure that technologies for efficient production, processing and consumption of charcoal are adopted locally and nationally;
- (vii) Support development of value chains for viable enterprises to enhance livelihood in the cattle corridor;

4.9 Fisheries and Other Aquatic Resources Conservation and Management

Fisheries and other aquatic resources constitute an important resource and contribute greatly to the nutritional welfare of the people while providing employment to thousands. This sector also makes significant contribution to the national economy. Unfortunately, fisheries and other aquatic resources are threatened by introduction of exotic species, pollution of the water bodies, and over-exploitation, among others.

Objective:

To conserve and sustainably manage fisheries and other aquatic resources for ecological and socio-economic development.

Guiding Principles:

- (i) Sustainable production of fisheries resources and the maintenance of aquatic biodiversity depend on the a healthy and productive aquatic ecosystem;
- (ii) The management and conservation of fisheries resources and aquatic biodiversity should be based on scientific research and information;
- (iii) The successful management of fisheries resources is dependent on a clear demarcation of enforcement and extension roles; and
- (iv) The involvement of the local community is essential for effective management of the fisheries resources.
- (v) Artificial breeding, fish farming and stocking reduces pressure on natural fish stock.

Strategies are to:

- (i) Contain over exploitation, destruction of habitats and control of species introduction through improved research efforts and better planning and monitoring;
- (ii) Set binding minimum standards for the protection of the environment from fisheries and aquaculture activities;
- (iii) Establish and/or maintain systems to monitor the quality of aquatic environments that support active fisheries;
- (iv) Promote public awareness on the need to protect aquatic ecosystems that support fisheries;
- (v) Ensure increased and effective participation of non-state actors in environment protection and conservation of fisheries resources and catchment ecosystems;
- (vi) Promote cage fish farming and expand production of traditional aquaculture;
- (vii) Encourage diversity in fish products for domestic and international Markets;
- (viii) Expedite implementation of the program on water hyacinth add other invasive species control and eradication in all major water bodies;
- (ix) Strengthen integrated cross boarder natural resources management systems/mechanisms;
- (x) Identify and promote climate change adaptation strategies; and
- (xi) Promote massive sensitization and control of spread of the HIV epidemic in the fishing communities

4.10 Energy

The vital role of the energy sector in national socio-economic development cannot be over-emphasized. Wood fuel, petroleum products, electricity, new and renewable sources are the main sub-sectors. The energy exploitation and consumption patterns reflect the country is still in infancy stages of energy application in production processes. The exploitation pattern is such that biomass accounts for 92 per cent of total energy consumed while fossil fuels account for 7 per cent and electricity 1 per cent. Most of the biomass energy is from wood, which is consumed in the form of charcoal and firewood. This exploitation pattern is not sustainable because it heavily relies on non renewable energy that is both costly; untimely, limited and has serious environmental effects (NDP, 2010)

Objectives:

To promote sustainable use of available energy sources and use of renewable energy and energy use efficiency to reduce ENR degradation.

Guiding principles:

- (i) Where feasible, incentives should be provided to complement industries and institutions which utilize large amounts of fuel wood to have their own woodlots or contract for their fuel wood supplies;
- (ii) Promote private woodlots, especially in wood deficit areas, and technical assistance should be provided to private producers of fuel wood and other forest products;
- (iii) Private sector involvement in energy exploration, development and distribution including hydroelectric power and fuel wood (including peri-urban) plantations should be encouraged;
- (iv) Provision of incentives for the use of non-woodfuel and the application of energy efficient technologies; and

Strategies are to:

- (i) Encourage sustainable exploration, development, production, distribution and use of available sources of energy by both the public and private sector;
- (ii) Develop a comprehensive energy policy which adequately addresses issues related to shortage and inefficient use of fuel wood;
- (iii) Promote alternative energy technologies as well as increasing efficiency of conversion in fuel wood utilization (e.g. improved cook stoves, charcoal kilns, brick ovens, etc);
- (iv) Improve local capacity to manage woodlands by encouraging people's participation in forest planning and management;
- (v) When feasible, provide economic incentives for private and institutional fuel wood plantations;
- (vi) Promote and facilitate the use of bio-fuels;
- (vii) Invest in power generation from wind;
- (viii) Promote development of co-generation for power production under a PPP arrangement; and

- (ix) Support the implementation of the existing energy legislations.

4.11 Oil and Gas

The upstream and midstream oil and gas sector is relatively new but with huge potential to impact the national economy. To exploit these resources, large investments will be required for exploration development, production, transmission and distribution. In addition investment in the necessary physical infrastructure will be undertaken. It should be noted that upstream, mid-stream and downstream operations and investments will have both direct and indirect environmental implications. Therefore, caution and care have to be under taken while exploiting theses resources.

Objective:

To ensure that oil and gas activities are undertaken in a manner that conserves the environment and biodiversity.

Strategies are:

- (i) Promote sustainable development of Oil and Gas;
- (ii) Operationalise the Oil and Gas environmental monitoring plan;
- (iii) Coordinate the implementation of the oil spills contingency plan;
- (iv) Strengthen institutional arrangements for management of environmental aspects of Oil and Gas;
- (v) Prioritize environmental and social concerns/issues in the oil sector;
- (vi) Develop waste management regulations for oil and gas; and
- (vii) Promote awareness about dangers of oil & gas products (transportation, storage and disposal).

4.12 Minerals & Mining

Uganda is endowed with a variety of minerals and the revenue generated is increasingly contributing significantly to Uganda's GDP and the sector offers good employment opportunities. However the accompanying mineral exploration, mining, and processing activities, for both artisanal and small scale mining, result into serious adverse environmental impacts.

Objective:

To ensure that mineral exploration and mining operations / activities are undertaken in a manner that conserves the environment and biodiversity.

Strategies are:

- (i) Promote sustainable development of the minerals and mining sector;
- (ii) Strengthen institutional arrangements for the management of environmental aspects of mineral exploration and mining;
- (iii) Prioritize environmental and social concerns/issues in mineral exploration and mining;
- (iv) Develop waste management regulations for mineral exploration and mining; and
- (v) Promote awareness about dangers of adverse environmental impacts of mineral exploration and mining;

CHAPTER V: POLICY IMPLEMENTATION

Policy implementation will involve the successive detailing of policy from the level of intent (as expressed in the above statements) through the structuring of actions required to achieve intended policy outputs and impacts. The revised NEMP will trigger integration of emerging environmental concerns / issues into other sector development plans. Once these actions are undertaken, a monitoring and evaluation strategy will need to be developed and the M&E system will need to be strengthened to assess the impact of policies and actions on the environment, the population and the economy.

In order to maintain consistency of the NEMP(2014)with emerging environmental and development issues in the country, Government will undertake periodic reviews of the environment sub-sector performance and the NEMP by identifying emerging issues requiring further policy interventions at least every five years and to review the NEMP at least every ten years.

5.1 Environmental Legislation

Most of the existing ENR legislation is sectoral and hence NEMP (2014) will trigger mainstreaming and harmonization of the pertinent legislations to bring on board emerging issues.

Objective:

To strengthen/create a legal framework for the implementation of the NEMP

Guiding Principles:

- (i) Environmental legislation should provide for sustainable development which entails sustainable utilization of environmental resources to meet society's needs for present and future generations;
- (ii) The legislation should be made to suit the political, social, cultural and economic framework of the country;
- (iii) All people in the country should be assured of the fundamental right to an environment adequate for their health and wellbeing;
- (iv) A legal framework should provide a mechanism for formulating, reviewing, and updating of sectoral laws and district bye-laws related to the management of the environment including a framework for environmental standards, the EIA process and polluter pay principle;
- (v) The legal framework should strengthen rather than take away the sectoral competencies, capabilities and responsibilities;
- (vi) A broad framework for both punitive and incentive measures should be provided;
- (vii) The framework should provide a mechanism for popular participation of the people in the development of national and local policies, laws and plans on environmental management; and
- (viii) Regional and global cooperation should be fostered through agreements, conventions and treaties on sustainable utilization of natural resources for economic development.

Strategies are to:

- (i) Strengthen NEMA as the principle national agency for the coordination, monitoring and supervising of all activities in the field of environment;
- (ii) Enhance compliance with environmental legislation and standards;
- (iii) Review and amend legislation on the management of the environment which will, among others, create rights and responsibilities for individuals to bring action to prevent and/or stop activities likely to affect the environment;
- (iv) Enhance right of access to environmental information and protect proprietary information;
- (v) Streamline a framework for environmental monitoring and assessment which will require a prior environmental assessment process of activities which are likely to affect the environment or use of natural resources;
- (vi) Strengthen district and local environmental committees to be responsible for monitoring , coordinating, planning and advising the district and local authorities on matters pertaining to wise management of the environment including compliance to relevant district bye-laws;
- (vii) Streamline a broad framework for environment planning including guidelines for management of cross-sectoral and sectoral components of the environment;
- (viii) Review and update sectoral laws and policies in conformity with the principles, strategies and actions of sustainable resource management and development;
- (ix) Update a framework for environment related standards including establishment of standard criteria for the management of hazardous materials and toxic chemicals;
- (x) Provide a system for the minimization and control of pollution and introduce an appropriate pollution licensing system;
- (xi) Ensure that the true and total costs of environmental pollution are borne by the polluter in accordance with the “polluter pays” principle;
- (xii) Create a mechanism for access to environmental resources for all and where the environment has been degraded provide for restoration (Environmental resources held in trust for the people by government);
- (xiii) Ensure that environment education and awareness is integrated in the education system at all levels; and
- (xiv) Enact legislation to operationalize EPF and establish and operationalize an Environmental Tribunal.

5.2 Institutional Framework /Coordination and Governance

Environmental concerns, being cross-sectoral, require an integrated multi-sectoral management approach which provides for a comprehensive institutional mechanism that ensures wide and active participation and interaction by everybody. Additionally functioning governance structures, legal and policy instruments as well as institutional capacity for judicious implementation and enforcement are necessary conditions for effective environmental governance.

There is, however, need to address the following concerns/issues: efficiency and effectiveness; institutional mandates; weak linkages and synergies; duplication and overlapping of activities; financing; institutional structures and reporting mechanisms. It is, however, hoped that locating NEMA under the Office of the Prime Minister (OPM) will resolve some of the current concerns.

Objectives:

To strengthen governance and the institutional mechanisms needed to implement the NEMP for Uganda.

Guiding Principles:

- (i) Environmental management needs a “powerful voice” to ensure cross-sectoral coordination and management;
- (ii) An environmental management and coordinating institution should limit itself to coordination, monitoring and supervision; overseeing compliance and providing technical support services;
- (iii) The institution should develop close links and liaison with line ministries, including the ministries, departments and agencies responsible for environment, finance and economic planning, local authorities, NGOs and the private sector;
- (iv) Environmental management requires political support for effectiveness at national, district and community levels;
- (v) The coordinating institution should be able to respond quickly and decisively to changing circumstances;
- (vi) The institution should have power to seek legal redress for non-compliance of environmental standards; and
- (vii) Effective environment management requires prioritization and provision of adequate funding

Strategies are to:

- (i) Strengthen NEMA as the principal agency responsible for coordinating, monitoring, supervising and regulating all activities in the field of the environment;
- (ii) Strengthen institutional capacity for centralized environmental management
- (iii) Locate NEMA under the Prime Minister’s Office;
- (iv) Define and streamline mandates, roles and responsibilities of the different actors in ENR management;
- (v) Strengthen partnerships, networks and collaboration in environmental management;
- (vi) Strengthen NEMA Board of Directors to bring on board representatives of major emerging issues; and
- (vii) Establish new (for emerging issues) and restructure existing Technical Committees to strengthen technical support to the board.

5.3 The role of Research and academia in the implementation of NEMP.

Research and academia have to be actively engaged in the implementation of the NEMP (2014). Achieving socio-economic transformation and sustainable development requires continuous improvement in the way we produce and deliver goods and services within the economy. Several of the identified emerging environmental and developmental issues require immediate applied research to develop 'home grown' solutions. This can be realized through accelerated use of applied technology, research and innovation.

Objectives:

- (i) To develop skills needed to implement national programs of environmental management;*
- (ii) To carry out local demand-driven research needed for proper management of the nation's environmental resources; and*
- (iii) To develop management options to address emerging environmental and development concerns.*

Guiding Principles:

- (i) Demand driven basic and applied research programs are critical for environmental management, and these programs should be prioritized;
- (ii) Training programs in environmental and natural resource management should be coordinated and strengthened; and
- (iii) Development of management options to address emerging environmental and development concerns.

Strategies are to:

- (i) Promote research for the improvement of the productivity of the Environment and natural resource base;
- (ii) Promote research on valuation of the ecological and socio-economic values of important ecosystems and Biodiversity;
- (iii) Promote research on early warning and disaster reduction systems; and new and emerging issues;
- (iv) Promote research on control of alien and invasive species;
- (v) Promote research on air pollution and atmospheric resources ; and
- (vi) Establish and operationalise an environment management and appropriate technology development research fund

5.4 The role of CSOs, Cultural and Faith Based Institutions in Environmental Policy Implementation

The role Local Governments, Civil Society Organizations (CSO's) and Cultural and Faith Based Institutions can play through advocacy, mobilization and dialogue with communities is very crucial. These

institutions will contribute to holding the different players accountable with regard to environmental issues and participate in getting the voices of the poor and disadvantaged into designing, monitoring and implementation of programmes in environment and natural resources management. CSO's may also be contracted in the delivery of various services, especially in the communities where activities will be undertaken

Civil society provide a pivotal role in mobilizing societies and communities to articulate demands and concerns over the use, management and access to natural resources at local, sub-regional and national levels in addition to facilitating the development of management skills among ENR dependent communities. They therefore supplement the efforts of the public sector and help in ensuring that the concerns of the underprivileged are incorporated in the national development process.

Objectives:

- (i) To promote increased involvement of CSOs, cultural and faith based institutions in advocacy, mobilization and dialogue with communities;*
- (ii) To maximize the contribution of civil society engagement in the implementation of the NEMP; and*
- (iii) To promote public accountability in the management of environment and natural resources.*

Guiding Principles:

- (i) Civil society mobilize communities, create and facilitate civil spaces for articulation of needs and demands;
- (ii) Civil society play a representative role for the voiceless in designing, planning, implementing and evaluating the NEMP and other national programs and actions;
- (iii) Civil society mobilize both technical and financial resources to supplement government efforts in resourcing sustainable management of the country's ENR; and
- (iv) Cultural and Faith Based Institutions have a strong influence on society and this avenue / channel should be utilized for the sustainable management of ENR.

Strategies are to:

- (i) Strengthen institutional relations and information exchange with CSOs;
- (ii) Develop framework for building partnerships in ENR management;
- (iii) Provide incentives to enhance CSO investment in the ENR sector;
- (iv) Develop and implement a strategy for enhancing financial and technical capacity on ENR CSO network.
- (v) Engage cultural and faith based institutions in the management of ENR; and
- (vi) Promote ENR information dissemination via cultural and faith based institutions

5.5 Regional and International Cooperation

Uganda has acceded to a number of Multi-lateral Environmental Agreements; international conventions; EAC and other regional agreements with respect to the environment including, among others, the

United Nations Convention on Biological Diversity (CBD); United Nations Framework Convention on Climate Change (UNFCCC) and the United Nations Convention to Combat Desertification (UNCCD). Considerable efforts have also been made to domesticate these instruments that support sustainable use of the environment.

Objectives:

To effectively participate in the development and implementation of sub-regional, regional and global initiatives/efforts for enhancement of conservation and management of environmental resources for sustainable socio-economic development

Guiding principles:

- (i) Environmental issues /problems do not respect national or regional boundaries;
- (ii) Active participation in regional and global efforts geared to redress environmental issues and improving the quality of life.
- (iii) Fundamental right of the people to live in a clean and healthy environment;
- (iv) Common but differentiated responsibility and capability in environment management
- (v) Co-operation in the management of transboundary environment and natural resources;
- (vi) Environment is a common or public good and needs cooperation in its management
International participation in the development of policies, plans, processes and activities for management of common good.

Strategies are to:

- (i) Strengthen and develop sub-regional, regional and international partnerships and networks to enhance environmental management and sustainable development;
- (ii) Support domestication and enhance synergies and linkages in the implementation of MEAs, regional and sub-regional cooperation frameworks;
- (iii) Establish a national MEAs coordination mechanism;
- (iv) Promote national participation in sub-region, regional and international for environment management and sustainable development for optimum benefits to the country
- (v) Promote awareness about regional and global environmental issues and concerns to the policymakers and the general public

5.5.1 Green Economy and Sustainable Development

Uganda is developing a framework of action and follow up for transition to a green economy linked to the Sustainable Development Goals (SDGs) that are to replace the Millennium Development Goals (MDGs) in the Post 2015 development agenda. This arises out of the need for urgent action to reverse / reduce land degradation, carbon emissions; pollution and to strive to achieve a land degradation

neutral world in the context of sustainable development. The policies for green economy in the context of sustainable development and poverty eradication will be guided by our national circumstances and priorities and in accordance with all the Rio principles, Agenda 21 and the Johannesburg Plan of Implementation and contribute towards achieving relevant internationally agreed development goals.

Objectives:

To promote equitable and inclusive growth in income and employment driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services.

Guiding principles:

- (i) Promote development of a green economy in the context of sustainable development.
- (ii) Promote low carbon development path ways
- (iii) Promote inclusive and equitable growth
- (iv) Enhance energy and resource use efficiency

Strategies:

- (a) Promote adoption and adaptation of low carbon and efficient technologies in all public and private sector projects / investments;
- (b) Broaden integration of “green economy concepts” in all sectors of the economy;
- (c) Develop the necessary industrially and environmentally skilled human resource and physical infrastructure;
- (d) Support opportunities for foreign and domestic investment in green industrialization in Uganda;
- (e) Catalyze and support investments by targeted public expenditure, policy reforms and regulation changes;
- (f) Maintain, enhance and, where necessary, rebuild natural capital as a critical economic asset and source of public benefits, especially for poor people whose livelihoods and security depend strongly on nature;
- (g) Promote protection and restoration of the integrity and functionality of degraded fragile ecosystems (wetlands, river banks, lake shores, rangelands, hilly and mountainous areas);
- (h) Provide advisory services on ways to move towards a green economy;
- (i) Engage a wide range of research, non-governmental organizations, business and other partners in implementing the Green Economy Initiative.

5.5.2 Transboundary / Cross Border Natural Resource Management

Due to the complexity and transboundary nature of environmental issues, there is increased concern for a regional and global approach to redressing these issues. This concern forms an important operational basis for enhancing sound management and conservation of environmental resources. Additionally conflicts over control and management of shared resources are very common.

Uganda is a member state of the East African Community (EAC) and consequently, is signatory to its protocols. Key among these is the EAC Protocol on Environment and Natural Resources (2006) and the EAC policy on Climate Change.

Objectives:

- (i) To improve management of trans-boundary environment and natural resources;*
- (ii) To take measures to control environment and natural resources degradation especially of air, land and water pollution arising from trans-boundary activities;*
- (iii) To cooperate in conserving, protecting and restoring the health and integrity of ecosystems including shared ecosystems;*

Guiding principles:

- (i) Promote adoption of a common vision in addressing the challenges of achieving sustainable development at the local, national and regional levels through sound environment and natural resources management;
- (ii) Promote involvement and coordination of intergovernmental, NGOs, CSOs, the private sector and the public in sound environment and natural resources management for sustainable development in the Partner States; and
- (iii) Strengthen cooperation of the Partner States in relation to development and harmonization of policies, laws, and strategies in environment and natural resources management in the attainment of sustainable development.

Strategies are:

- (i)** Strengthen integrated cross border management systems/mechanisms; effective trans-boundary cooperation and collaboration in the management of shared ecosystems across countries;
- (ii)** Strengthen adherence to the MEAs and the EAC Protocol on Environment;
- (iii)** Support domestication and enhance synergies and linkages in the implementation of MEAs, regional and sub-regional cooperation frameworks;
- (iv)** Coordinate and guide national participation in sub-region, regional and international for environment management and sustainable development for optimum benefits to the country;
- (v)** *In country Shared Natural Resources: Develop* frameworks for a harmonized and common approach to the conservation and management of shared natural resources (catchments, river basins, wetlands, mountains, rangelands etc);
- (vi)** Promote sustainable growth and development of the Partner States through sustainable use and management of the environment and natural resources;
- (vii)** Promote shared responsibility and cooperation in environment and natural resources management among Partner States; and
- (viii)** Promote development and harmonization of policies, laws and strategies for environment and natural resources management to support sustainable development.

5.5.3. Atmospheric resources

Atmospheric resources include rainfall, air, solar radiation and wind. They provide life-supporting goods and services. The air contains oxygen, carbon dioxide and nitrogen that are essential for life and livelihoods. Rainfall is a source of water for people, animals and plants, and for rain-fed agriculture. The ozone layer, found in the stratosphere, protects human beings from ultraviolet radiation that is likely to cause cancer. Solar insolation provides light and energy. The sun, wind and rivers are sources of energy for direct use or electricity generation. Atmospheric resources offer a variety of opportunities for sustainable development. Thus, threats to atmospheric resources undercut development opportunities and mitigating the causes and impacts of potential threats is important.

Atmospheric resources are transboundary and are affected by global, regional and national practices. The unsustainable management of these resources at the global, regional, sub-regional and national levels has implications for development and livelihoods.

Objective:

To ensure sustainable utilization, protection and management of atmospheric resources for socio-economic development

Guiding principles:

- (i) Wise use and protection of atmospheric resources
- (ii) Protection of the ozone layer
- (iii) Improving air quality

Strategies:

- (i) Promote policy interventions necessary to remove barriers to investments in renewable energy resources;
- (ii) Promote mitigation of causes and impacts of climate change, extreme weather events and air pollution;
- (iii) Promote investments in businesses and projects which contribute to sustainable development whilst conserving the value and quality of atmospheric resources;
- (iv) Develop laws and regulations to ensure implementation and smooth governance of the use of atmospheric resources;
- (v) Promote access to modern environmentally sound technologies for harnessing atmospheric resources (e.g. renewable energy resources)

5.6 Monitoring and Evaluation

In order to know and assess the impact of the above policies and strategies on the environment, constant and progressive monitoring and evaluation will have to be strengthened. Monitoring compliance which involves collecting and analyzing information on the compliance status of the different stakeholders is important. Monitoring is essential to detect and correct environmental

violations, provide evidence to support enforcement actions and evaluate implementation progress by establishing compliance status. Weak enforcement of environmental compliance is attributed to inadequate technical capacities, monitoring infrastructure and trained staff in enforcement institutions.

These policies and strategies will require fine tuning or modification for them to respond to changing circumstances in the future. Furthermore, it is important that measures of progress and effectiveness of the proposed strategies are evaluated as the investment in the Authority and environmental programmes are carried out. In this context, an internal monitoring and evaluation system is fundamental for the efficient and effective operation of the Authority.

Objectives:

- (i) To determine the impact of the proposed policies and strategies, ascertain their progress and effectiveness in the Authority and environmental programs;*
- (ii) To achieve efficient and effective NEMP performance by providing feedback to NEMA management and other stakeholders at all levels to improve operational plans and to take timely corrective action in case of shortfalls and constraints.*

Guiding principles:

- (i) To be effective, a monitoring and evaluation (M&E) system, including an M&E system for the Authority should be able to track the progress and evaluate the effectiveness of NEMA, and assess the impact of those functions on the environment, the economy and the population;
- (ii) The effectiveness of NEMA as a coordinating, monitoring and supervisory institution hinges largely on its ability to access and coordinate the use of information;
- (iii) The Environmental Liaison Units (ELUs) should play an important role of ensuring co-operation by managing the flow of information to and from line ministries;
- (iv) Most changes in environmental management should be produced by activities undertaken at the grassroots level; and
- (v) Monitoring programs and impact levels should be closely related to annual targets on a multi-year operational plan;

Strategies are to:

- (i) Develop a Monitoring and Evaluation Strategy.
- (ii) Strengthen internal M&E system to include ministries, districts and other agencies;
- (iii) Ensure that all programs and activities of all agencies have well defined information systems with adequate and timely supply of data and information;
- (iv) Establish progress indicators for all programs and activities, and where possible, targets on annual and multi-year plans;
- (v) Improve and broaden the scope of indicators for all MDAs and districts;

- (vi) Undertake continuous and periodic evaluation of all aspects of the environment including production of district environmental profiles ;
- (vii) Produce and publish periodically national and district state of the environment reports; and
- (viii) Develop ecosystems sensitivity atlases.

Annex 1: GLOSSARY OF TERMS

“Biodiversity offsets” are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken.

“Biosafety” refers to policy and legislative frameworks aimed at assessing and managing potential risks to human and animal health and their environments resulting from the sustainable use of genetically modified organisms.

“Biotechnology” means any technique that uses living organisms or substances from living organisms to make or modify a product, improve plant or animal breeds or micro-organisms for specific purposes.

“Biofuels” are liquid or gaseous fuels produced from biomass that can be used to replace petrol, diesel and other fuels. Biofuel production is being sought in preference to fossil fuels so as to harness the perceived benefits of biofuels, which include a reduction in greenhouse gas emissions, increased energy security, creation of employment opportunities, increased income for rural households improved balance of trade through reduced importation of petroleum and enhanced National Economic development. As such, the biofuel industry is expanding globally.

“Biological diversity” means the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part and includes diversity within species, between species and of ecosystems

“Climate change” means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods

“Desertification” means land degradation in arid, semi-arid and dry sub humid areas resulting from various factors, including climatic variations and human activities;

“Disaster” : A serious disruption of the functioning of a community or a society causing widespread human, material , economic or environment losses which exceed the ability of the affected community or society to cope using its own resources.

“Disaster Risk Management” The systematic process that integrates risk identification, mitigation and transfer, as well as disaster preparedness, emergency response and rehabilitation or reconstruction to lessen the impacts of hazards.

“Disaster Risk Reduction (DRR)” The conceptual framework of elements considered with the possibilities to minimize vulnerabilities and disaster risks throughout a society, to avoid (prevention) or to limit (mitigation and preparedness) the adverse impacts of hazards, within the broad context of sustainable development.

"Drought" means the naturally occurring phenomenon that exists when precipitation has been significantly below normal recorded levels, causing serious hydrological imbalances that adversely affect land resource production systems;

"Ecosystem" means a dynamic complex of plant, animal, micro-organism communities and their non-living environment interacting as a functional unit;

"Endangered species" means any species that is in danger of extinction throughout all or part of its range;

"Environmental impact assessment" means a systematic examination conducted to determine whether or not a programme, activity or project will have any adverse impacts on the environment;

"Ex-situ conservation" means conservation outside the natural ecosystem and habitat of the biological organism;

"Genetic resources" means genetic material of actual or potential value;

"Green Economy" - one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a green economy can be thought of as one which is low carbon, resource efficient and socially inclusive.

"Invasive and alien species" means a species that is not an indigenous species or an indigenous species that has become aggressive and covers large expanses of land.

"Multilateral environmental agreement" means international legal instruments for the regulation of activities affecting the environment to which Uganda is a Party;

"Payment for environmental / ecosystem services (PES)" means market-based approach to conservation based on the twin principles that those who benefit from environmental services (such as users of clean water) should pay for them, and those who generate these services should be compensated for providing them. In a PES mechanism, service providers receive payments conditional on their providing the desired environmental services (or adopting a practice thought to generate those services). **OR "PES"** - A **voluntary** transaction in which a **well-defined** environmental service (ES), or a form of land use likely to secure that service is bought by at least one ES **buyer** from a minimum of one ES **provider** if and only if the provider continues to supply that service (**conditionality**)."

"Public Private Sector Partnership" - The cooperation between the public and private sectors with the aim to improve the quantity, quality and efficiency of public services.

"Strategic Environmental Assessment (SEA)" refers to a range of "analytical and participatory approaches that aim to integrate environmental considerations into policies, plans and programmes and evaluate the inter linkages with economic and social considerations".

“Sustainable Development” means development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs;

“Sustainable Use” means present use of natural resources, which does not compromise the ability to use the same by future generations or degrade the carrying capacity of ecosystems and habitats;

“Wise Use” means sustainable utilization of resources, including wetlands for the benefit of humankind in a way compatible with the maintenance of the species and the integrity of the ecosystem

Annex 2: INTEGRATION COSTS ESTIMATES ('000\$)¹

Framework policy so most of the costs are in the sector budgets. Consequently only integration costs have been provided for to avoid double costing.

COMPONENTS	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Total
1.Creating awareness on integration in sector and Local government plans and budgets²	30					30
2.Integration of NEMP(2014) development and environmental issues in sectoral policies, development plans and budgets	25	25	25	25	25	125
3. Integration of NEMP(2014) development and environmental issues in LG plans and budgets	35	35	35	35	35	175
4.Integrating NEMP (2014) emerging development and environmental issues in education curriculum³	25					25
Total	115	60	60	60	60	355

¹ Integration costs required for the first 5 Years of the policy implementation period i.e. all issues should be integrated within that period of policy implementation;

² One year / one off single activity in the first year of the policy implementation;

³ One off single activity in the first year of the policy implementation

Annex 3: Periodic Review Cost Estimates ('000 \$)

COMPONENT	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total
1.Periodic review⁴		40		40		40		40			160
2.Mid-term evaluation⁵					50						50
3.Policy Terminal Review										70	70
Total		40		40	50	40		40		70	280

⁴ Biannual periodic review

⁵ Fifth year policy evaluation

