

**A REVIEW
OF THE APPLICATION OF ENVIRONMENTAL
IMPACT ASSESSMENT (EIA) IN UGANDA
A REPORT PREPARED FOR THE UNITED NATIONS
ECONOMIC COMMISSION FOR AFRICA**

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LIST OF ABBREVIATIONS

ACTS	African Center For Technology Studies
NGOs	Non-Governmental Organizations
CBOs	Community- based Organizations
DEO	District Environment Officer
EIA	Environmental Impact Assessment
EMCBP	Environment Management Capacity Building Project
HIV/AIDS	Human Immuno-deficiency Virus; Acquired Immune Deficiency Syndrome
HSSP	Health Sector Strategic Plan
IAIA	International Association for Impact Assessment
IUCN	International Union for Conservation of Nature.
MDGs	Millennium Development Goals
MFI	Micro-Finance Institution
MUIENR	Makerere University Institute of Environment and Natural Resources
NEPAD	New Partnership for Africa's Development
NEAP	National Environment Action Plan
NEMA	National Environment Management Authority
PAF	Poverty Alleviation Fund
PEAP	Poverty Eradication Action Plan
PCE	Policy Committee on the Environment
PMA	Plan for Modernization of Agriculture
SEA	Strategic Environment Assessment
SEP	Strategic Exports Program.
SIDA	Swedish International Cooperation Agency
UMHCP	Uganda Minimum Health Care Package
UNDP	United Nations Environment Program
UPE	Universal Primary Education
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

In 1995, Uganda enacted a National Environment Statute (now Act Cap 153) calling for Environmental Impact Assessment (EIA) for all development activities likely to negatively impact on the environment before they are implemented and the National Environment Management Authority (NEMA) was created and mandated to operationalize and implement this requirement. One of the principle provisions of the Act is the requirement that EIA should be administered by NEMA in consultation with Lead agencies, private sector and all other interested parties and communities likely to be impacted upon by development activities. In order to operationalize this requirement therefore, there was a critical need for NEMA to develop EIA capacity among other institutions and among other stakeholders at national, district and local levels if they were to play a meaningful role in EIA as provided for in the law. By 1995, however, this capacity was near nil. Thus, in order to make the EIA system work, the initial focus of NEMA's activities was to be on EIA institutional and capacity development.

Among the elements of the Uganda EIA process that brought the necessity for institutional development and capacity building among other stakeholders was the need for stakeholder consultations during conduct of environmental impact assessment and the need for the EIA process to give opportunity for public involvement at all stages.

Prior to 1995, awareness on EIA was low and the status of institutional development for EIA was characterized by limited local EIA expertise, lack of specific responsibility for EIA among developers, sectoral government institutions and at district and local levels, limited NGO, civil society and public participation, and there was no formal institutional framework for EIA review and approval.

Over the recent years, however, a number of steps have been taken to develop institutional EIA capacity among various stakeholders and major achievements have included training of managers of the EIA process in sectoral agencies and local government levels and there has been an increase in local EIA expertise (Practitioners) with an Association of EIA Practitioners, the Uganda Association for Impact Assessment (UAIA) launched in June 2001. Public participation in EIA is now very evident and a number of civil society groups have emerged and play an advocacy role for EIA.

Notwithstanding the achievements made, there is still need to create more awareness and capacity among developers and other stakeholders to appreciate the value of EIA as a planning tool and not merely as a legal requirement. There is need to maintain political support for use of EIA at national, district and local levels and need for development of capacity for Strategic Environmental Assessment. There is also need to further develop approaches to ensure effective public participation in EIA, as well as need to create and strengthen regional and sub-regional EIA networks to complement national efforts for promotion of EIA.

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1.0 INTRODUCTION

1.1 The context of the report

Since the introduction of a modern system of environment management in Uganda in early 90s, there have been a lot of developments that have shaped the way the country manages the environment. Key among these developments is the introduction of the requirement for Environmental Impact Assessment (EIA) for all development projects and activities that are likely to have significant impact on the environment, so that adverse impacts can be foreseen before they are implemented and ways and means identified to eliminate or minimize them, while the positive impacts could be maximized.

This report presents a review of the application of Environmental Impact Assessment (EIA) in Uganda since it became a requirement by virtue of the National Environment Act, Cap 153 of 1995. Important elements reviewed in the report are the development trends in application, institutionalization and EIA capacity development in Uganda since mid 1996. The report also highlights some positive interventions where EIA has been able to make a contribution towards sound environmental management. Also included in the report is an analysis of the challenges in the application of EIA so far, and highlights of some practical lessons so far learnt.

The report lays particular emphasis on presenting EIA as a tool limited to its application to project/activity level assessment and seeks to make a distinction between it and Strategic Environment Assessment (SEA) which is a complimentary tool for analysis of environmental impacts at a more higher policy, plan and program level planning.

In the context of the current application of EIA in Uganda, the scope of EIA as presented in this report includes the ecological, social and economic dimensions of the environment. In this context therefore, the report presents EIA as inclusive of social and health impact assessments which other jurisdictions consider as separate and different in application from EIA.

1.2 Outline of the Report

The first part of this report briefly outlines the context of application of Environmental Impact Assessment in Uganda and also underscores the importance of EIA as a planning tool and as an aid to environmentally sound decision-making.

The second part of the report provides background information on the socio-economic status of Uganda as well as status of implementation of the sustainable development agenda.

Part three of the report gives the policy, legal and regulatory framework for EIA in Uganda and outlines the key provisions for EIA as defined in these respective policies and laws. This part also presents the main elements of the Uganda EIA process, including the procedures and guiding principles.

Part four provides the role of the different actors in operationalising the EIA process as spelt out in the National Environment Act, Cap153 of 1995, and other laws, and includes the roles of the National Environment Management Authority (NEMA), lead agencies, local authorities and the public. This also includes the roles of non-governmental organizations

(NGO's), community based organizations (CBOs), the private sector, and other stakeholders involved in various stages of the EIA process.

The fifth part of presents the experiences in implementation of EIA in Uganda, including the highlights of the main achievements, challenges and opportunities.

Part six presents capacity building issues, including efforts so far made in development of EIA capacity as also gives suggestions on further capacity development needs. Part seven presents the key lessons learnt and also gives practical highlights of some success elements in the application of EIA so far.

The report concludes with some recommendations, which are deemed to be important in further development of EIA as a useful planning tool for sustainable development.

2.0 BACKGROUND INFORMATION ON UGANDA

2.1 Socio-economic issues

During the financial year 2003/04, Uganda's economy grew at a rate of 6% compared to 5.2% in the 2002/03 financial year. This was largely due to higher agricultural output brought about by timely and adequate rains for the food crop-planting season. The recovery in food crop output also led to lower food prices, which also helped to keep overall inflation levels low. Despite a decline in coffee export volumes by almost half a million bags, much of the growth in non coffee export volumes came from investment in fish processing facilities, improved management of tea estates and a decline in freight charges. Almost all sectors of the economy registered positive growth; notable among these were electricity generation, transport and communication, public construction, hotels and restaurants.

Since 1997, Uganda has been implementing the Poverty Eradication Action Plan (PEAP) aimed at promoting economic growth, eradicating poverty and achieving better income distribution. During the seven years of implementing the PEAP, Uganda has achieved significant progress in economic growth as well as meeting its social objectives. These social objectives to a large extent have strong linkages and synergy with the internationally agreed Millennium Development Goals (MDGs) and the New Partnership for Africa's Development (NEPAD) principles. The MDG's eight goals are to: (i) eradicate extreme poverty and hunger; (ii) achieve universal primary education; (iii) promote gender equality and empower women; (iv) reduce child mortality; (v) improve maternal health; (vi) combat HIV/AIDS, malaria, tuberculosis and other diseases; (vii) ensure environmental sustainability; and (viii) develop a global partnership for development. Likewise NEPAD is a pledge by African leaders to eradicate poverty.

2.1.1 Poverty Trends

In Uganda, the incidence of absolute poverty was reduced from 44% in 1997 to 34% in 2000, the reduction mainly driven by increases in average from income rather than redistribution. Although in the recent past (1999/00-2003) there has been a reversal in the income poverty reduction trend, the welfare of the poor has improved with respect to increased access to services particularly education, water, health and agricultural advisory services.

According to the Uganda National Household Survey 2002/03, the percentage of people living in poverty is estimated at 39%, corresponding to 8.9 million Ugandans. This marks a significant increase in poverty both in absolute and percentage terms since 1999/2000, when 34% of the population (approximately 7.2 million Ugandans) were living in poverty. Notably however, poverty remains below the levels recorded in earlier periods estimated at 56% in 1992 and 44% in 1996/97.

Between 1999/00 and 2002/03, the incidence of poverty increased more in rural areas than in urban areas. In terms of absolute numbers of people living in poverty, rural areas experienced an increase from 7.0 million in 1999/00 to 8.5 million in 2002/3 for the rural areas, whilst the corresponding figures for urban areas are from 0.3 million to 0.4 million. Although rural areas remain markedly poorer than urban areas and registered lower growth in mean living standards, the proportionate rise in poverty is actually higher in urban areas.

The rise in poverty is particularly marked for those households where the household head works in agriculture – among whom, between 1999/00 and 2002/03 poverty rose from 39% to 49%. Poverty among agricultural households was worse among those practicing crop farming than among those engaged in non-crop agriculture like livestock and fishing. In part crop farmers have been hit by lower producer prices (e.g. coffee). A key national challenge therefore is to reverse the increase in poverty incidence as well as the rural urban and regional income inequalities. The solution lies in addressing the specific challenges of increasing agricultural and non farm productivity and incomes; providing a conducive environment for private investment growth; and increasing access by rural and urban poor households to productive assets and basic services as well as amenities.

2.1.2 Service Delivery

As a result of implementing poverty reduction programs in the PEAP, access to services by the poor has been enhanced despite some shortcomings in quantity and quality. Substantial external resources in form of debt relief and budget support that are channeled through the Poverty Action Fund (PAF) to local governments, coupled with community participation have strongly supported increase in quantity and quality of the available services. The following is the progress made in improving access to basic services, the main challenges and the emerging priorities in the context of the revised PEAP.

- **Education**

The Government of Uganda recognises education as an important aspect and an index of national development; and is keen to ensure a good quality of life by providing educational opportunities for individuals to develop their potential for positive transformation of society. To achieve this, Uganda has made remarkable advances in expanding educational opportunities by introducing the Universal Primary Education (UPE) programme in 1997. When UPE was introduced, enrolment more than doubled, reaching 5.3 million and is now estimated to be more than 6.6 million.

In the provision of basic education, Government has prioritized improvement of the quality of Universal Primary Education with results showing positive trends in select quality indicators. Provision of instructional materials has resulted in the reduction of the pupil/book ratio from 6:1 in 2000 to 3.1 in 2003. School sanitation and hygiene has also improved from 700:1 as estimated in 1997 to 96:1 in 2000 with 80% of the schools having

separate facilities for girls. A policy for the educationally disadvantaged children has been put in place and provides for basic education for children who are experiencing barriers to learning. There is empirical evidence now to show that the returns to education in Uganda increased in the 1990s for all sub-sectors and that they were highest for primary education, followed by tertiary and secondary education. This evidence confirms Government policy of prioritizing delivering quality primary education and strengthening the performance of higher levels of education.

Despite the positive trends, delivery of high quality primary education is still a challenge. Several factors including poor attitudes about the value of education among parents, especially educating a girl child, the lack of separate sanitary facilities for girls, absenteeism and late coming by both teachers and pupils, and lack of school meals contribute to the challenge. Currently, a program funded by Government and the United Nations World Food Program on school feeding covers only 325,000 pupils.

Government is also working on improving functional adult literacy programs and vocationalising the education system through inclusion of agriculture in the primary school curriculum to make UPE more practical and relevant. The focus will continue to be on improving quality and access to primary and secondary education, increasing the relevance of the curriculum at all levels, improving teacher quality and promoting recruitment and retention of high quality teachers by putting in place the right incentives. This will involve expansion of physical school facilities to cater for the increase in enrolment and creating a more conducive learning and teaching environment. Access to secondary education is currently very unequal across income groups. By building institutions in under-served areas and increasing the number of bursaries, Government aims to improve access to the poor.

- **Health and Nutrition Services**

Improving the quality of life and enhancing the human capital of the poor comprise an essential component of Uganda's Poverty Eradication Strategy. The general health status of the population of Uganda is unfavourable. The burden of disease in Uganda remains high, pre-natal and maternal conditions, malaria, acute respiratory tract infections and AIDS, together account for over 60% of the total national death burden. Before 2001, the poor were paying for health services in Government health centres. Following the abolition of cost sharing, poor people's access to health care has improved although the quality of services remains a challenge. Government recognizes the need to make improvements in the following areas:

- Drug availability
- Presence of qualified health staff,
- Access to health services,
- Transport for referral patients,
- Access to health services by disabled people especially family planning services,
- Strengthening preventive primary health care activities especially to prevent malaria, and
- HIV/AIDS diseases resulting caused by poor sanitation.

The Health Sector Strategic Plan (HSSP) aims at achieving the delivery of the Ugandan Minimum Health Care Package (UMHCP) to all Ugandan households. The UMHCP has been phased to start with an affordable set of priorities including immunization, malaria

control, information, education and communication, reproductive health and HIV/AIDS. Under the HSSP, Government has also built 400 new HC2s to HC3 status (including maternity services and is upgrading 150 HC4s to provide emergency obstetric and surgical services. In the area of nutrition, the Government with the support of the World Bank has since 1998 been implementing the Nutrition and Early Childhood Development Project. The project covers 34 out of the 56 districts in Uganda.

Despite the efforts on mortality, health outcomes in terms of the high infant and maternal mortality rates remain poor and infant mortality did not improve significantly between 1990 and 2000.

- **Water and Sanitation**

Access to safe water and sanitation facilities are critical to improved health. Government Strategy is to ensure that there should be full coverage of the urban population by 2010 and of the rural population by 2015. Rural water coverage has continued to improve from around 54.9% by the end of 2002/03 to about 60% today. Urban water coverage is estimated to have increased from 54% in 2000 to about 60-65% by now, although access rates have somehow fallen back because of the rapid growth in peri-urban and informal urban settlements. Piped sewerage services are accessible to an estimated 8% of the urban centers while the remainder of the urban population use on site systems, which are predominantly pit latrines.

- **Agriculture**

Most households in Uganda continue to derive their incomes from agriculture. However, the agricultural sector still faces severe constraints that partly explain the increase in income poverty, especially among crop farmers. Key among these is the relatively low price levels for agricultural produce associated with production of low-value crops and limited end products. Apart from limited access to agricultural support services such as crop and veterinary extension services and food processing technology, the limited access to infrastructure such as electricity and water infrastructure, limited market information inhibit the development of a vibrant agricultural sector with linkages to other sectors of the economy.

Given the extent of structural weaknesses that exist in the agricultural sector, and the implications for poverty eradication, prospects for reversing the income poverty trend lie in addressing these constraints. In the revised PEAP, the Government identifies more strategic approaches to enhance the provision of public goods for agricultural production in the areas of agricultural extension, research and technology development, marketing and preservation of the natural resource base, particularly soil and forests as an emerging high priority. In order to further improve production, competitiveness and incomes in the country, the Government is also focusing on modernizing agriculture, provision of the necessary infrastructure including roads, electricity and railways as well as better implementation of the Plan for Modernization of Agriculture (PMA) and the Strategic Exports Program (SEP).

For network services such as rural electricity services, Government will continue to encourage private investment, particularly in rural electrification by providing subsidies to private investments in this area through the rural electrification fund. This is important for the development of agri-based industries. So far, this support has been provided to projects

in West Nile, Kakiri, Rukungiri and Kilembe. In the mean time, the Government will also continue with the recent path-breaking public interventions to promote strategic exports and encourage large-scale farming by the private sector.

- **Employment**

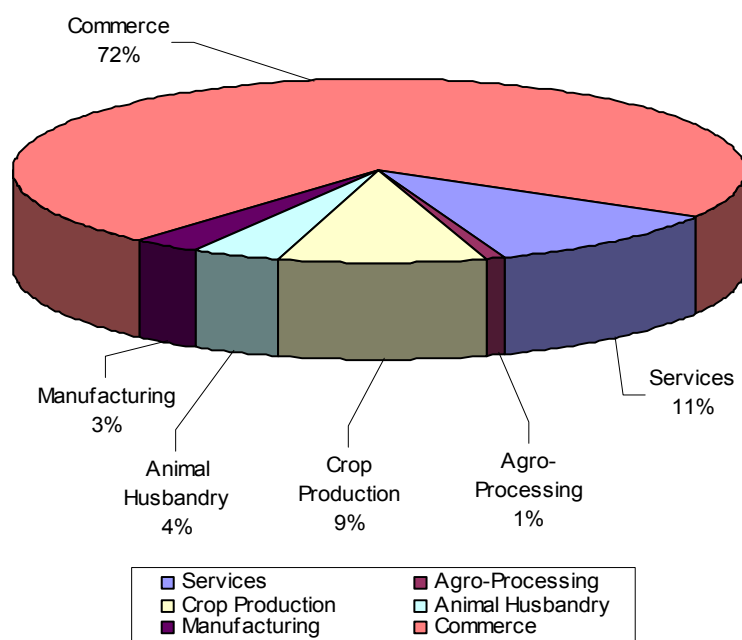
According to the Labour Force Survey of 2003/04, Uganda's labour force is expanding at a rate of 3.4% per annum but the growth of employment opportunities is relatively slow, particularly in urban areas. Nearly 346,000 people in Uganda are unemployed with more than half of them being in the central region followed by the eastern, western and northern. Outright unemployment is higher in urban areas than in rural areas (12% compared to 2%), notably highest in Kampala. However, the visible under-employment rate is higher in rural than urban areas and particularly among the women. The unemployment rate is particularly high among the youth especially in the 20-29 age-bracket. It believes that improving the employment situation requires a stable macro-economic framework, accelerated economic growth, continued growth of the private sector and accelerated human resource development.

In response to the above challenges, Government has defined a long-term vision for human resource development. The Ministry of Education is working on increasing the number of technical and science students to cater for post primary education, and a comprehensive National Employment Policy is at an advanced stage of development.

- **Financial Services**

In terms of economic activities, Micro Finance Institutions (MFI) clients are mainly engaged in agriculture-related activities, manufacturing, commerce, service industry, and others. Figure 1 shows that MFI loans are concentrated in trading activities, following by agriculture, services, manufacturing and other activities. The analysis of figures available shows that approximately 80% of the savings portfolio and 75% of the loan portfolio belongs to female client's meaning that female clients have benefited more from micro finance services. The Government funded programs have had most of their loans in agriculture, an indication of the Government commitment to capitalize agriculture-related activities. However, the recovery rate in this area has been rather disappointing. The challenge therefore, is how to finance agriculture at affordable interest rates. Further work is ongoing to study further and address the current bottlenecks in the area of agricultural finance and to develop a medium-term strategy to enhance the provision of financial services to all types of farmers in the country.

Figure 1: Distribution of Micro-Finance loans by sector.



2.2 Environment and Natural Resources

Uganda has recorded many achievements in her attempt to protect the environment in the proper utilization of natural resources. To begin with, the 1995 Constitution made sustainable development, exploitation and utilization of natural resources and the environment a priority national objective.

In general, from the time Uganda signed the Rio declaration, Government has been promoting policies and programs for energy efficiency, industrial pollution control, sound land use practices, management of toxic and other hazardous wastes as well as capacity development for environment management across all sectors and local Governments. The country has also put in place supportive policies, strategies and legislation in an attempt to ensure sustainable natural resources use and integration of environmental considerations in national development planning.

The Land Sector Strategic Plan 2001 – 2011, for example, requires that Uganda's land resources are used productively and sustainably. A number of measures have also been put in place to combat deforestation. They include the introduction of forest management plans, Government approval of the National Biodiversity Strategy and Action Plan, among others. The National Environment Management Authority (NEMA) to streamline and co-ordinate environment management in the country, the National Planning Authority has been established and the Natural Resources Committee of Parliament has been an effective forum for addressing mismanagement of natural resources.

Government has also taken considerable steps to shift policy, planning and decision making powers for effective natural resources management to local authorities. These also include the creation of the District and Local Environment Committees under the National Environment Act for decentralized environment management. Other sectoral committees in the areas of water and sanitation and wildlife have also been established.

2.3 Implementation of the Sustainable Development Agenda

The Government of the Republic of Uganda is committed to the principles of Agenda 21 and their implementation. Indeed Uganda was among the first countries to embrace the principles of Agenda 21 and to enter international agreements such as the Convention on Biological Diversity and the United National Framework Convention on Climate Change that emanated from Agenda 21. Since Rio, Uganda has joined the rest of the world to promote initiatives and mechanisms for attainment of sustainable development.

Uganda joined the rest of the world in 2001 and undertook a comprehensive and highly consultative process of reviewing its progress in implementation of Agenda 21. The process culminated in the production of a **“National Progress Assessment Report on the Implementation of Agenda 21”** report which was produced just before the World Summit on Sustainable Development which took place in Johannesburg, South Africa in August-September 2002. The Report focuses on selected areas where Uganda has made remarkable progress in the implementation of Agenda 21, namely:

- Social Development,
- Natural Resources and Environment,
- Trade and Investment,
- Good Governance,
- Roles of major groups in sustainable development, and
- Funding for Sustainable Development.

2.4 Good Governance and Decentralization in Uganda

Uganda is committed to the principle of good governance and has embraced the governance commitments under Agenda 21, which, among others, include for empowerment of local and community groups through the principle of delegating authority and accountability for natural resources management to the most appropriate level. At the national level, Uganda has undertaken several institutional reforms aimed at promoting good governance and enhancing transparency and accountability in management of national affairs. In 1995, the Office of the Inspectorate of Government was enshrined in the Constitution, *inter alia* to eliminate corruption, abuse of authority and of public office.

Government has introduced reforms that clearly show considerable political will and commitment to use decentralisation as a means to achieving sustainable development objectives. A major decentralisation programme was embarked upon with the coming into force of the 1995 Constitution, which enshrined decentralisation as a key governance concept to apply to all levels of local government. Both the Constitution and the Local Governments Act, 1997 (as amended) have entrenched the concept of decentralisation to extend to natural resources management.

The roles of major groups in implementing Agenda 21 in Uganda

The participation of NGOs, women, youths and children in sustainable development has increased in the past ten years and their contribution is recognized in the various activities they are engaged in. Uganda has made impressive progress in the last ten years in formulating gender sensitive policies to positively integrate gender in the mainstream of the development process. This is reflected in the Constitutional provisions, the Gender Policy of 1997, and the Local Governments Act 1997, among others. There is a dedicated Department in charge of Women Affairs in the Ministry of Gender, Labour and Social Services.

Government recognises the Youth (15 – 29 years) as a critical mass and as such is represented at all levels of policy and decision making (including local councils, legislature and executive arms of government). A National Council for Children and Youth was created in 1993. There are also policies which are Youth-specific. These include Universal Primary Education (UPE), Adolescent Health Policy and the Youth Policy.

3.0 LEGAL AND REGULATORY FRAMEWORKS

3.1 Policy on EIA

Environmental Impact Assessment (EIA) is a tool for protecting the environment. EIA ensures that environmental impacts are considered during conception, design and implementation of projects, at the same time that their financial and technical aspects are being considered. EIA is conducted to ensure that important environmental resources are recognized and protected early in the planning and decision making process. EIA also provides developers and decision makers with an opportunity to examine likely impacts of development proposals on the environment and thereby recommend mitigative actions for adverse impacts before decisions are made to approve such actions.

The National Environment Action Plan (NEAP) process resulted in the preparation of a National Environment Management Policy which was passed in March 1994. The overall Goal of the Policy is sustainable social and economic development, which maintains or enhances environmental quality and resource productivity. The specific Policy objectives are to introduce:

- Sound environmental management,
- Environmental planning,
- Ecosystem conservation,
- Sustainable resource consumption, and
- Environmental awareness and community participation.

Within the policy, EIA is recognized as an important tool to assist in attaining the above-mentioned Policy objectives. The Policy also recognizes that “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 Environmental Impact Assessments” The Policy in advocating for the use and application of EIA, seeks to integrate environmental concerns early enough in the development planning process for all activities and projects at national, district and local levels, with full public participation.

In addition to the above policy provisions, other sectoral natural resources Policies such as the National Policy for the Conservation and Management of Wetland Resources (1995) refer to EIA as a management tool and include the need for EIA for development activities likely to affect these resources as a policy strategy for the conservation and management of such resources.

In order to understand the implementation status of the Uganda EIA system, it is important to understand the framework under which the Uganda EIA system operates. The Uganda EIA system is based on the premise of active participation and involvement of a number of critical stakeholders whose collective contribution must be brought into play to produce one whole working system. The critical stakeholders in the Uganda EIA process include the following:

- (i). Developers whose role it is to carry out EIAs as part and parcel of their overall planning process,

- (ii). the National Environment Management Authority (NEMA) which has the mandate to co-ordinate, supervise and monitor the implementation of the EIA requirements,
- (iii). lead agencies (including sectoral Government Departments and Local Governments) whose role is critical in providing input in reviewing EIAs on development activities whose implementation has likely impact on components of the environment under their jurisdiction,
- (iv). EIA Practitioners whose technical skills are critical in evaluating environmental impacts of projects and thereby providing useful information to both developers and decision makers,
- (v). Members of the general public, including those communities likely to be affected by development activities and whose input is critical at various stages of the planning and development process. This also includes NGOs and civil society groups whose advocacy role provides pressure for effective adoption of EIA as a planning and decision making tool.

3.1 Enabling legislation for EIA

Whereas the EIA process in Uganda is operational by virtue of the National Environment Act, Cap153 of 1995 and the Environment Impact Assessment Regulations of 1998, a number of other laws, most of which were enacted from 1995, have continued to promote the use and application of EIA. Thus, in addition to the laws discussed below, a number of reform initiatives are ongoing in other areas such as forests, mining, fisheries, energy and petroleum sectors. These initiatives seek to ensure full integration of environmental aspects through use and application of EIA for development activities and projects in these sectors.

3.2.1 The Constitution of the Republic of Uganda, 1995

The Constitution is the supreme law and provides for environmental protection and conservation. Under the National Objectives and Directive Principles of State Policy, the Constitution provides that the state shall promote sustainable development and public awareness of the need to manage land, air, and water resources in a balanced and sustainable manner for the present and future generations.

The Constitution further provides that the utilization of the natural resources of Uganda is to be in such a way as to meet the development and environment needs of present and future generations of Ugandans. In particular, the state is required to take all possible measures to prevent or minimize damage and destruction to land, air, and water resources due to pollution or other causes. Article 39 of the Constitution entitles every Ugandan to a clean and healthy environment. Under Article 17(1) (j) it is the duty of every citizen of Uganda to create and protect a clean and healthy environment.

The Constitution also imposes a duty on the state to protect important natural resources; including land, water, minerals, oil, fauna and flora on behalf of the people of Uganda. In its Article 245, the Constitution provides that parliament shall, by law, provide for measures intended to protect and preserve the environment from abuse, pollution and degradation, to manage the environment for sustainable development; and to promote environmental awareness. Parliament has ably done this through the enactment of the National Environment

Act, the Water Act, the Land Act, the Wildlife Act and the Local Government Act, among others.

3.2.2 The National Environment Act, Cap 153, 1995

This National Environment Act, Cap 153, of 1995 includes EIA in its general principals as a requirement for proposed projects and activities which may significantly affect the Environment or use of natural resources. The Act also establishes the National Environment Management Authority (NEMA) as the principal agency responsible for supervising, coordinating and monitoring all aspects of the environment, including the review of environmental impact assessments carried out for various projects. The Act empowers NEMA, in consultation with lead agencies, to issue guidelines and prescribe measures and standards for the management and conservation of natural resources and the Environment. To this effect, NEMA prepared Guidelines for EIA (1997) which define the roles of the different stakeholders in the EIA process. Section 19 of the Act imposes an obligation on all developers to carry out EIA for their projects that are likely to have adverse impacts on the environment.

The Act also provides for the establishment of a Technical Committee on EIA and this has been in place since 1996. The Committee provides advisory services to NEMA on critical aspects of EIA implementation.

3.3 EIA Specific Legislation/Regulations

3.3.1 Environmental Impact Assessment Regulations, 1998

The EIA Regulations elaborate in detail the provisions of the Act and present the details of the EIA process and roles of various stakeholders. The Regulations also stipulate it as an offence for any person to commence, proceed or execute any project without approval from NEMA. The Regulations also advocate for the principle of full disclosure in the conduct of EIAs and makes it an offence to make false statements in an EIA.

3.3.2 The National Environment (Conduct and Certification of Environment Practitioners) Regulations 2003

Following concern about the quality of EIA s done by Practitioners, and in order to provide for a uniform system of certification and registration of EIA practitioners, the National Environment (Conduct and Certification of Environment Practitioners) Regulations, 2003 were gazetted and set minimum standards and criteria for qualification as an EIA Practitioner. The Regulations also establish an independent Committee of Environmental Practitioners whose roles include, among others, to regulate the certification, registration, practice and conduct of all environmental impact assessors and environmental auditors. The Committee also has powers to take disciplinary action as it finds necessary for ensuring the maintenance of high professional standards, ethics and integrity of environmental Practitioners in the conduct of EIA and Environmental Audits.

3.4 Dispute settlement mechanisms/procedures

The Uganda EIA system provides for appeals where any party may not be satisfied with any decision taken in accordance with the EIA approval mechanisms. Regulation 38 (1) of the

EIA Regulations provides that any person who is aggrieved by any decision of the Executive Director with respect to EIA may, within 30 days of the decision, appeal to the High Court. Other than this, there is no other dispute settlement mechanisms specifically provided for in case of dispute on matters of EIA. In practice, however, some developers have occasionally approached NEMA requesting for reconsideration of NEMA's decisions without necessarily going to courts of law. In such cases NEMA has certainly been open enough to give hearing to such parties, but of-course without necessarily leading to reversal of NEMA's decisions.

In addition to the above, in practice the Uganda EIA process allows for opportunities for reconsideration where project modification aimed at addressing outstanding environmental concerns could lead to re-consideration of decisions earlier taken.

3.5 EIA Procedures and Guidelines.

3.5.1 Levels of EIA

An Environmental Impact Assessment required under the Uganda EIA process shall be appropriate to the nature, scale and possible effects of the proposed project, and to the nature of the proposed site for its location. Sufficient understanding of these factors is necessary for the initial screening decision on the level of EIA required.

The level and number of stages the assessment will pass through will depend on the expected extent and gravity (significance) of the environmental impacts. The level of EIA required for a particular project will vary on a project by-project basis, but in general such levels will include the following three major categories:

- a. Small scale projects whose potential adverse environmental impacts can easily be identified and for which mitigation measures can readily be prescribed, and can be included in the design and /or implementation of the project. The environmental aspects of such small-scale projects would normally be approved on the basis of the mitigation measures so identified, without the need for a detailed Environmental Impact Study requiring field investigations.
- b. Projects for which there is some level of uncertainty on the nature and level of impacts, thus requiring a more in-depth Environmental Impact Review (EIR) to determine if mitigation measures can be identified, or a more detailed Environmental Impact Study (EIS study) would be required. If during the review adequate mitigation measures can be identified and incorporated in the project design, the necessity for a detailed Environmental Impact Study may be eliminated and the environmental aspects of the project may be approved.
- c. Projects which clearly will have significant impacts whose mitigation measures cannot readily be prescribed unless a detailed Environmental Impact Study (EIS study) of the project and its possible alternatives is conducted. Conducting an EIS study requires greater public participation.

3.5.2 Scenarios for EIA application in Uganda: the current practice.

Because EIA is conducted before projects are implemented, it is appropriate that it shall be conducted before projects are licensed or approved for implementation by the responsible licensing and/or approving agencies.

As far as the practice has so far been, three scenarios are being used for the application of EIA by developers. These include:

- i. application of EIA as part and parcel of the project planning and design process,
- ii. application of EIA after finalization of project design but before actual implementation, and
- iii. Application of EIA after project development has commenced through site preparation or actual construction and in most cases as a consequence of the project having been halted by regulatory authorities on the basis of EIA having not been undertaken.

According to the Uganda EIA requirements, option (i) is the most desirable, and in any case EIA must be considered as part of the planning and design process for all projects. The Uganda EIA process therefore seeks to promote option one rather than the later two scenarios and the process described below is based on option one as provided for in the law and EIA Guidelines. However, scenarios (ii) and (iii) are re-visited under the Section on constraints and challenges as highlighted under part 5.2 of this report.

3.5.2.1 Application of EIA as part of the project planning and design process

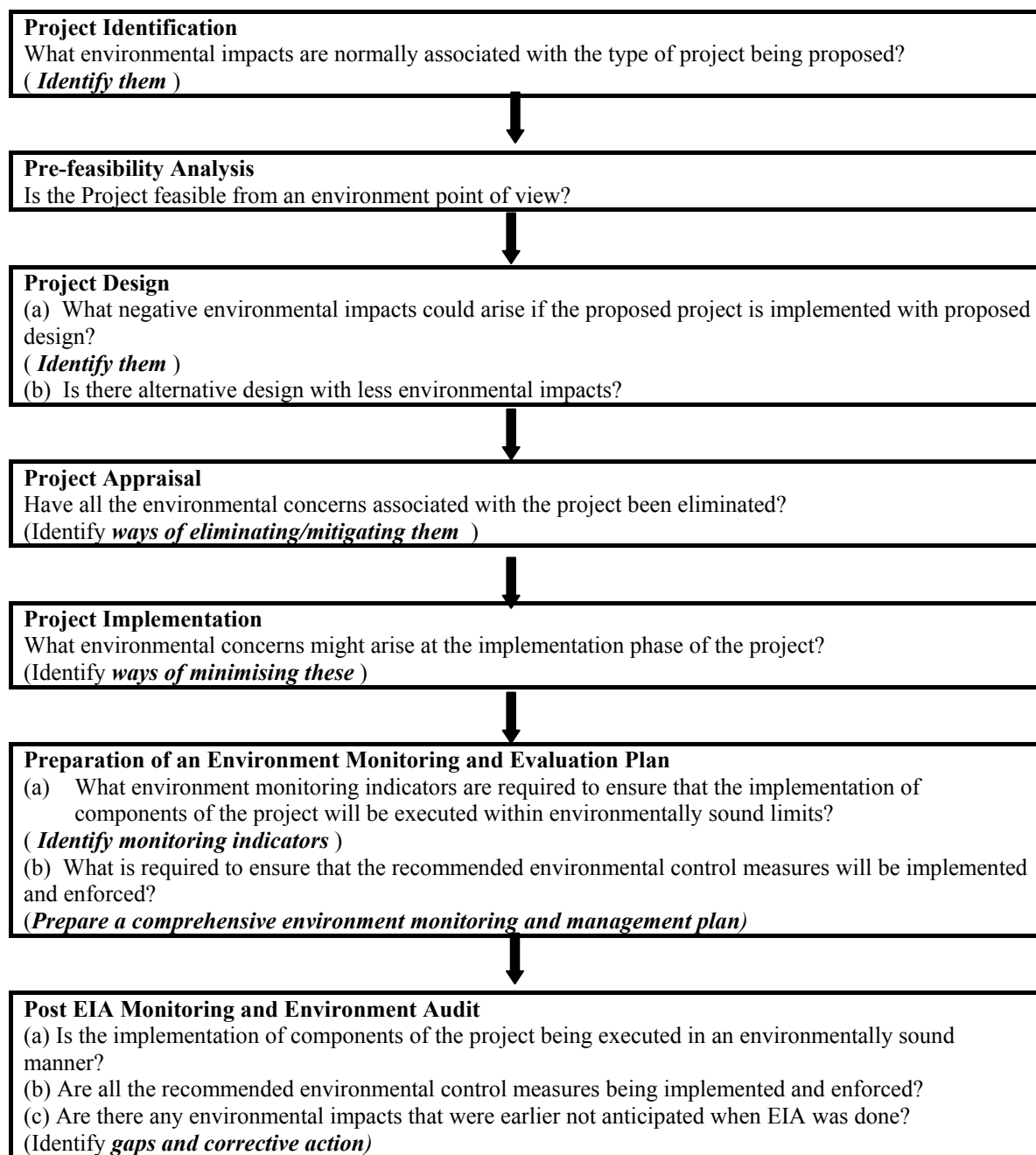
In order to meet the objectives of EIA, and in order to fully integrate environmental concerns into the project planning and design process, it is a requirement that EIA shall be conducted as an integral part of the overall project cycle from project conception / identification, feasibility analysis and project design, and shall therefore form the basis for environmentally sound project implementation and monitoring.

EIA conducted at the early planning stages serves as a tool that assists and guides developers in designing more environmentally sustainable projects, through providing environmental information and raising environmental concerns at key stages in the project formulation and/or planning cycle, thus leading to projects designed with **in-built** mitigation measures. Through this approach, any design proposals with potentially adverse environmental impacts can be mitigated, while those found to be incapable of mitigation could be changed accordingly. Thus, EIA applied at this stage permits early indication of practical design changes aimed at either avoiding or minimizing identified negative environmental impacts, or enhancing environmental benefits.

The information resulting from the environmental assessment at this early stage can be included in the regular project document and in the project brief being presented for approval. Such projects with in-built EIAs would then be reviewed in light of sufficiency of mitigation measures proposed for the identified impacts. **If comprehensively carried out, EIA done as part of the project design process will be all that is needed from the developer to satisfy the EIA requirement.** If, however, a detailed Environmental Impact Study is subsequently called for, it will focus on critical issues requiring detailed analysis.

Figure 2 presents a schematic application of EIA in the project cycle as has been designed to guide developers in Uganda.

Fig. 2: Simple EIA Application in Project Planning



3.5.3 Integration of the social and economic dimensions in the Uganda EIA system

In the National Environment Act, Environment is defines as “the physical factors of the surroundings of the human beings, including land, water, atmosphere, climate sound, odour, taste, the biological factors of animals and plants and the social factor of aesthetics and includes both the natural and the built environment”. Going by this definition, environment in this sense includes all the three dimensions, namely, ecological, social and economic

dimension. The Uganda EIA system therefore recognizes EIA to include all the three dimensions. In other words, all EIAs are expected to carry out assessments embracing the ecological, social and socio-economic aspects of the environment. It is for this reason that the practice so far has been **not to** separate Environmental Impact Assessment from social or health impact assessment as is the case in other jurisdictions.

Examples

- (i) When an EIA was done for the then planned use of aerial chemical spraying to control water hyacinth in Uganda's water bodies, apart from the ecological consequences, one of the main concerns which had to be addressed through the EIA was the economic implications of this exercise in the event that fish exports and therefore revenue from fish exports were affected in the process.

Another issue that had to be addressed was the social dimension of this activity in as far as it posed a direct threat to public health through use and application of potentially harmful chemicals that could find their way into the food chain. This aspect had to be addressed during the EIA.

- (ii) **EIAs for quarry operations.**

The application of EIAs for quarry operations is another example where social issues take center-stage more than even ecological concerns. Quite often quarry operations have generated need for compensation and/or resettlement and these social concerns have had to be addressed as part and parcel of the EIA studies. In addition, because quarry operations generate a lot of dust and noise that is a health concern, measures for workers protection have to be well defined during the EIA.

EIAs for road projects. Road projects generate impacts that cut across the ecological, social and economic dimensions. In the conduct of EIAs for roads therefore, the Uganda EIA system emphasizes coverage of all these aspects including compensation for lost property and/or land, selection of least cost road alignments, among others. Of serious health concern on EIAs for road projects is the issue of HIV/ AIDS. Most road EIAs now have to define the mechanisms for minimization of the spread of HIV/AIDS as part and parcel of the overall EIA.

3.5.4 Basic steps in the Uganda EIA Process.

The basic steps in the Ugandan EIA process include the following:

- Step I: The developer submits a project brief to NEMA and to any other appropriate lead agency. The Project Brief outlines basic information on the proposed activity/project to establish whether or not the activity is likely to have significant impact on the environment. The Contents of a Project Brief are contained in Box 1.
- Step II: Based on the contents of the Project Brief, the Authority (NEMA), in consultation with an appropriate lead agency(ies), carries out screening to determine adequacy of the Project Brief, in terms of the extent it addresses the

environmental issues or level of EIA required if it has not been done as described under 2.5.1.1 above.

The premise of the screening phase is that not all development projects may necessarily cause adverse effects on the environment due to differences in scale of the operation, nature of the proposed project and its location. Thus, not all proposed projects requiring EIA shall necessarily undergo the same level of assessment. The objective of the screening phase therefore is to determine the level of EIA required depending on whether the project has or does not have significant impacts.

- Step III: The developer is informed of the findings and decision whether further assessment is necessary or not. If the Project Brief adequately addresses environmental concerns, approval can be issued without the need for further assessment.
- Step IV: If the Project Brief is not adequate, a full Environmental Impact Study will be required and scoping to determine the likely significant environmental Impact is done and based on the scoping output, Terms of Reference (TORs) are prepared for approval by NEMA,
- Step V: The **Environmental Impact Study** is then carried out based on approved TORs
- Step VI: After the assessment, the Environmental Impact Statement (EIS) is submitted to NEMA for **review** in consultation with other relevant lead agencies and stakeholders. Depending on the nature of environmental impacts at hand, the review process may include holding of a public hearing especially where there are controversial issues, impacts of a trans-boundary nature or very outstanding social concerns. The contents of an Environmental Impact Statement are contained in Box 2.
- Step VII: Based on the review of the EIS, a **final decision** is then taken on the environmental aspects of the project. Such a decision shall be contained in a **Certificate of Approval of the Environmental Impact Assessment** issued by the Authority.

The EIA process also provides for subsequent post EIA **monitoring** after approval has been granted. This provides for both self monitoring by the developer , as well as for enforcement monitoring by the Regulatory Authorities.

A schematic presentation of the Uganda EIA process is contained in Annex 1.

Box 1: Basic Contents of a Project Brief

1. Name, title and address of developer;
2. Name, purpose, objectives and nature of project: size, products and inputs, sources of inputs, design etc.
3. Description of the proposed project site and its surroundings, and alternative sites/alignments considered, if any, where the project is to be located.
4. Conformity of the activity to existing laws, regulations and policies governing such project and the use of the site/area proposed for its location.
5. Alternatives considered (eg; technology, construction and operation procedures, sources of raw materials, waste handling, and/or alignments for the case of road projects;
6. Likely environmental impacts, and mitigation measures thereto.
7. Any other information that may be useful in determining the level of EIA required.

Box 2: The Basic Contents of an EIS

The Environmental Impact Statement shall include:

- 1.0 Executive Summary: a precise and non-technical summary and description of significant results and recommended actions.
- 2.0 Project Description: (including Name/Title, Purpose/Nature, Objectives, scale and activities during different phases of the proposed project, including its technical, economic, social and physical context).
- 3.0 Description of proposed Project site and surroundings (*including but not limited to the following: the spatial and temporal boundaries within which the project is planned, the existing conditions of the physical, biological and human environment, current land-use in the surrounding areas, as well as the trends and the anticipated future environmental conditions in the area, any environmentally sensitive areas or areas of unique biophysical, socio-economic or cultural value.*)
- 4.0 Significant Environmental Impacts and Risks (*Nature and level of environmental impacts that are likely to result from implementing and operating the project at various stages (including both adverse and beneficial impacts, long-term versus short-term impacts, unavoidable and / or irreversible significant environmental effects, growth inducing aspects etc).*)
- 5.0 Project alternatives considered
- 6.0 Mitigation measures: focusing on achievable, pragmatic, environmentally feasible and cost effective mitigation measures of the various alternatives.
- 7.0 Environmental Monitoring and Management Plan.
- 8.0 Bibliography and Literature Review

Appendices

- 9.0 List of individuals and agencies / organizations consulted
- 10.0 Preparation staff
- 11.0 Terms of Reference for the study.

Additional contents of the EIS:

- 12.0 Public and agency comments and responses thereto
- 13.0 Other relevant information

3.5.4.1 Time frames for various stages of the Uganda EIA Process

Under the National Environment Impact Assessment Guidelines, time frames for the various stages of the EIA process are defined and include:

Activity:	Duration (Working Days) (Upper limits)
Review of Applicants Project Brief: (Initial Screening Process)	14
Scoping Process:	14
Preparation of Environmental Impact Statement:	TBD*
Circulation and comment on EIS by lead Agencies:	21
Public Display of EIS for public review and scrutiny (where Public hearing is to be held)	28
Decision making after review	14

- Those items indicated as TBD are to be determined by the proponent in consultation with the study team.

3.5.5 Development of Sectoral EIA Guidelines.

In the development of EIA sectoral Guidelines, Uganda has to the extent possible tried to ensure that these are in conformity with the national EIA framework guidelines, and these sectoral EIA guidelines have largely been developed through internal stakeholder participation and review. To a large extent therefore, and notwithstanding the fact that the EIA process is seemingly standard globally, the process to develop these guidelines has relied less on adapting other existing guidelines elsewhere, but has relied more on national input to suit the national policies and guided by our own experiences with the implementation of the framework EIA guidelines.

The EIA sectoral Guidelines that have so far been developed to very advanced stages include those for the following sectors:

- Water sector,
- Mining sector,
- Energy sector,
- Transport sector and
- Wildlife and protected areas sector.

Sectoral EIA Guidelines still in the process of development include:

- Fisheries sector
- Forest sector, and
- Agricultural sector.

3.5.5.1 Process of development of EIA sectoral guidelines.

Two approaches have so far been used to trigger the development of EIA Sectoral Guidelines:

- (i) those guidelines whose preparation is initiated and championed by the sector responsible, with NEMA only providing technical support. Sectoral EIA Guidelines that have been prepared using this approach include the water sector EIA Guidelines, the road sector EIA guidelines and the Forest sector EIA guidelines.
- (ii) those guidelines whose preparation is initiated and funded by NEMA but with the sector playing a lead and central role in the preparatory process, including in drafting the guidelines. In this case, NEMA plays mostly a co-ordination role to bring on board other stakeholders and interest groups so that their input is obtained and integrated into the guidelines, otherwise for ownership purposes, the sector plays the lead role in the process to develop the guidelines.

The basic steps in the Guidelines preparatory process has included:

- (a) Preparation of Terms of Reference (TORS) for the preparation of the guidelines by the originator: ie; either the sector as per (i) above or by NEMA as per (ii) above,
- (b) Review of the TORS involving consultation with other relevant stakeholders,
- (c) Identification of lead preparers of the guidelines within the respective sector. At this stage, although a freelance consultant could be used, emphasis is put on technical staff of the sector taking the priority when it comes to selection of the technical preparatory team as has so far been the case in all the cases.
- (d) Drafting of the guidelines and submission of draft to NEMA for co-ordination of the review,
- (e) Co-ordination of the review by NEMA involving all other relevant stakeholders as well as the National EIA Technical Committee,
- (f) Forwarding of stakeholder comments to sector responsible for further integration into the draft and eventual production of a revised draft,
- (g) Re-submission of revised draft to NEMA to co-ordinate final review mostly by the EIA Technical Committee and other key stakeholders.

Adoption of the Sectoral Guidelines for publishing by NEMA in conjunction with the relevant sector.

3.6 EIA Guiding Principles and values

3.6.1 Rational and guiding principles for EIA

Development activities have impacts on the environment hence need for assessment and evaluation of these impacts. According the National Environment Policy, the guiding principles for EIA include:

- development options should be environmentally sound and sustainable;
- EIA should give opportunity for early recognition of environmental consequences;
- EIAs should consider: ecological, social, economic, and cultural impacts;
- EIA should be carried out for all public and private sector development activities in order to determine the “environmental threshold” of a particular activity;
- EIA should be conducted within the context of existing laws, policies and regulations;
- the EIA process should give opportunity for public involvement and consultation.

In addition to the above, the legislation on EIA and the EIA Guidelines provide for the conduct of EIA under the following guiding principles:

- **EIA to be done by the developer.**

According to the National Environment Act Cap 153, the conduct of EIA is the responsibility of the developer, and the costs associated with the assessment shall be borne by the developer. Since it is the developers who conceive and carry out planning for various aspects of their developments, it was logical that the responsibility for EIA was made that of the developer so that as early as possible during the planning process, they address the environmental concerns associated with their projects through conduct of EIAs.

- **Public and stakeholder involvement and participation at all stages**

It is a central policy of the Uganda EIA process that opportunity be provided for public involvement and participation, including individuals, or groups of local communities who may be directly affected by a proposed project. These may include government agencies, NGOs and other interest groups. The EIA process also provides EIA reviews through soliciting input of other stakeholders.

- **Lead agency involvement.**

The policy and legislation on EIA recognizes the important role that the sectoral lead agencies can play in ensuring that the implementation of sectoral development activities in areas under their jurisdiction is carried out in a manner that does not adversely affect the environment. The EIA process therefore requires that environmental impact assessment should be administered by NEMA in consultation with lead agencies.

- **Post EIA Monitoring**

An important element of the Ugandan EIA process is the requirement to define the framework for post EIA monitoring. All developers whose projects have been subjected to EIA are required to ensure that mitigation measures and actions as approved through the EIA to protect the environment are adopted and implemented. The developer is required to conduct self-monitoring, self record keeping and self reporting, and the information gathered through monitoring shall be stored and made available during inspection. The developer is also required to take all reasonable measures to mitigate any undesirable environmental impacts not contemplated in the Environmental Impact Statement, and accordingly report on those measures to the Lead Agency and to the Authority.

The responsible Lead Agencies, in consultation with NEMA, are also required to monitor compliance with implementation of activities to ensure that the design criteria, mitigation measures, and monitoring requirements as recommended through EIA are implemented.

4.0 INSTITUTIONAL FRAMEWORK FOR EIA IMPLEMENTATION

4.1 Main administrative body for EIA and description of duties

The National Environment Management Authority (NEMA), which became operational in 1996, was created as the principle agency responsible for oversight, co-ordination, supervision and monitoring implementation and compliance to the EIA requirements and also to champion EIA capacity building in Uganda. Section 6(1) (f) of the Environment Act provides that the Authority is charged with the function to review and approve environmental impact assessments submitted in accordance with the provisions in the Act or any other law.

The main functions of NEMA include the following, among others:

- To ensure the integration of environmental concerns in overall national planning through coordination with the relevant ministries, departments and agencies of government;
- To liaise with the private sector, government agencies and NGOS on issues relating to the environment;
- To propose environmental policies and strategies to the Policy Committee;
- To initiate legislative proposals, standards and guidelines on the environment in accordance with the National Environment Act;
- To review and approve Environmental Impact Assessments submitted in accordance with the National Environment Act or any other law;
- To promote public awareness through formal, non-formal and informal education about environmental issues;
- To undertake such studies and submit such reports and recommendations with respect to the environment as the government or the Policy Committee may consider necessary;
- To ensure observance of proper safeguards in the planning and execution of all development projects, including those already in existence that have or are likely to have significant impact on the environment;
- To undertake research, and disseminate information about the environment;
- Promote, encourage and ensure enforcement of environmental standards, regulations and the National Environment Statute, 1995.

Within NEMA is found the Department of Environment Monitoring and Compliance, which is responsible for environmental monitoring and ensuring compliance to environmental Regulations and standards. The Department also provides technical guidance on EIA matters and coordinates review of EIAs with other sectors / lead agencies, and provides advisory services to developers on EIA matters. The Department is also responsible for preparation and issuance of EIA certificates and also implements a follow up program to ensure that mitigation measures as contained in the EIAs and approval conditions stated in the certificates of approval are implemented. The Department also carries out training and capacity building on EIA.

NEMA's role in the EIA process is also supported by the statutory Technical Committee on EIA that provides advisory services to NEAM on EIA matters. The Committee's multi-disciplinary membership reflects the need for a multi-disciplinary approach in the conduct of EIA as well as the multi-faceted nature of impacts of development on the environment.

The current nine member Technical Committee draws members representing the following sectors; mining and energy, manufacturing/private sector, planning and economic development aspects, pharmaceutical/medical, public health, ecology and biodiversity, social aspects, infrastructure development/engineering, policy development, and agriculture. The Committee is, however, free to co-opt other experts as need arises.

4.2.1 Other Agencies / entities with administrative responsibilities / involvement in the EIA process.

4.2.1 Role of developers

According to the Uganda EIA legislation and guidelines, an Environmental Impact Assessment shall be undertaken by the developer, and the costs associated with the conduct of the assessment shall be borne by the developer. Such costs shall include, among others, costs for the conduct of Environmental Impact Studies, preparation and production of the EIS.

4.2.2 Lead Agencies

The role of NEMA in implementation of EIA as stated above does not relieve the relevant line ministries and sectoral departments and other public and private institutions from the primary duty of ensuring that EIA is done for projects and development activities under their jurisdiction and in accordance with their respective sectoral policies, and within the framework of cross-sectoral participation required in the conduct of environmental impact assessments. Each lead agency is therefore primarily responsible for ensuring that EIA is done for development activities under their jurisdiction, as well as carrying out review for EIAs of such projects. This responsibility also includes carrying out inspections related to the environment and implementation of the EIA requirements.

Where the review of any one EIA requires holding of a public hearing, the responsible lead agency shall take the lead in co-ordinating and executing the holding of such a public hearing in accordance with the guidelines that have been prepared by NEMA.

4.2.3 Role of the public and civil society

The role of the public and civil society is recognized in the Uganda EIA process and includes advocacy and provision of relevant information during the various stages of the EIA process, including EIA study and review stages. The Environment Act also provide for possible public intervention in cases where development is carried out without fulfilling the EIA requirement.

Furthermore, the Ugandan public has a vital role to ensure effective application of the EIA process, in particular their awareness and understanding of the process enables their effective involvement and participation during the initial scoping and review as well as decision making stages of the EIA.

4.3 Coordination among the different agencies

Over the last ten years, it is apparent that the implementation of the EIA process has depended on many factors coming together to produce a national EIA system. These include, among others:

- High-level political support,
- An enabling policy and legal framework, including sectoral policies that recognize the role of EIA in sectoral development planning,
- cross-sectoral awareness about the EIA process and its justification,
- development of implementing guidelines, including sectoral EIA guidelines, and
- development of human resources, including managers of the EIA process such as reviewers of EIA reports and EIA practitioners involved in the actual conduct of EIA.

In accordance with the provisions in Sections 19 - 21 of the National Environment Act, Cap 153 (1995), NEMA is required to consult closely with the relevant Lead Agency(ies) and other stakeholders in the review of Environment Impact Statements (EISs). The EIA review process is intended, among others to obtain stakeholder input, and also to identify any further information that is required or any other issues, if any, requiring further mitigation or study. Therefore, each Project Brief or Environmental Impact Statement submitted to NEMA must be forwarded to the relevant lead agency and local authority for their input.

The National Environment Act also creates the office of the District Environment Officer who acts as a liaison officer between NEMA and the District and carries out co-ordination of EIA activities at the district level.

5.0 IMPLEMENTATION ISSUES

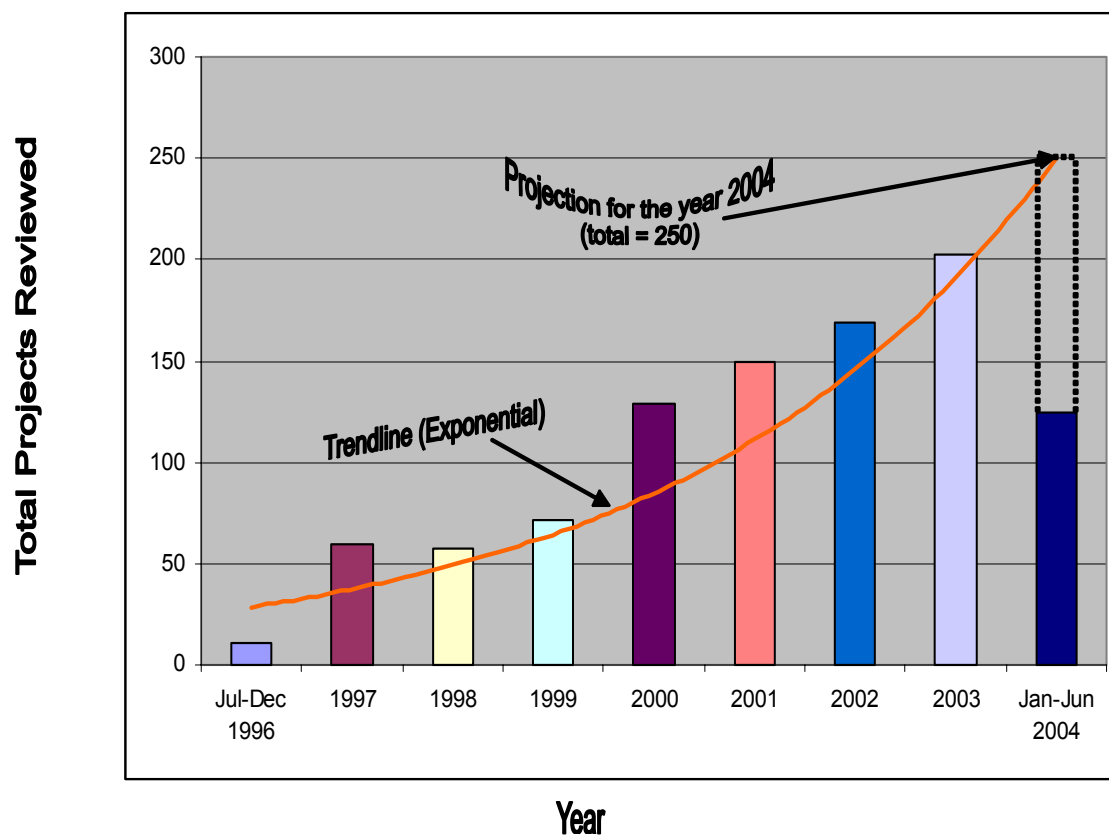
5.1 Institutionalization / application of EIA including developments and trends

Since the operationalisation of the EIA requirement, EIA has been able to play its role in influencing some major development decisions. Over 950 projects have been subjected to EIA, out of which no less than 800 have been approved for implementation, while up-to 20 have not been approved as they were evaluated to be likely to be detrimental to the environment if implemented in the proposed locations or in the form proposed. The list of the 20 is included as Annex 2.

Since becoming a requirement by law in 1996, EIA has been able to make a contribution to decision making and has in many instances led to avoidance of costly impacts to the environment and natural resources. EIA has therefore been able to assume its role as a planning and decision making tool and indeed EIA has been able to contribute to important decisions that have been acclaimed as positive decisions towards protection and conservation of environmental resources. An example of such important decisions include the decision taken by NEMA in 1997 and based on EIA, not to allow use of herbicides for control of water hyacinth in Uganda's water bodies due to its likely environmental consequences both ecologically and economically. Other alternative control options such as mechanical and biological weed control were, however, permitted. Annex 2 gives examples of other proposed development projects whose implementation, if carried out would have caused severe environmental impacts but because the assessment of their environmental impacts was done before implementation, a decision was taken not to implement them at the proposed locations. The respective developers where, however, advised to explore other alternative options.

Further to this, awareness on the EIA requirement has been built to the extent that "EIA" is now a household word among many Ugandans. This increasing awareness about EIA is reflected in the trends in use and application of EIA since 1996. To-date over 950 projects have been subjected to EIA across all sectors. Figure 3 shows trends in the numbers of projects subjected to EIA since July 1996 while figures 4 and 5 show the distribution of these projects by sector.

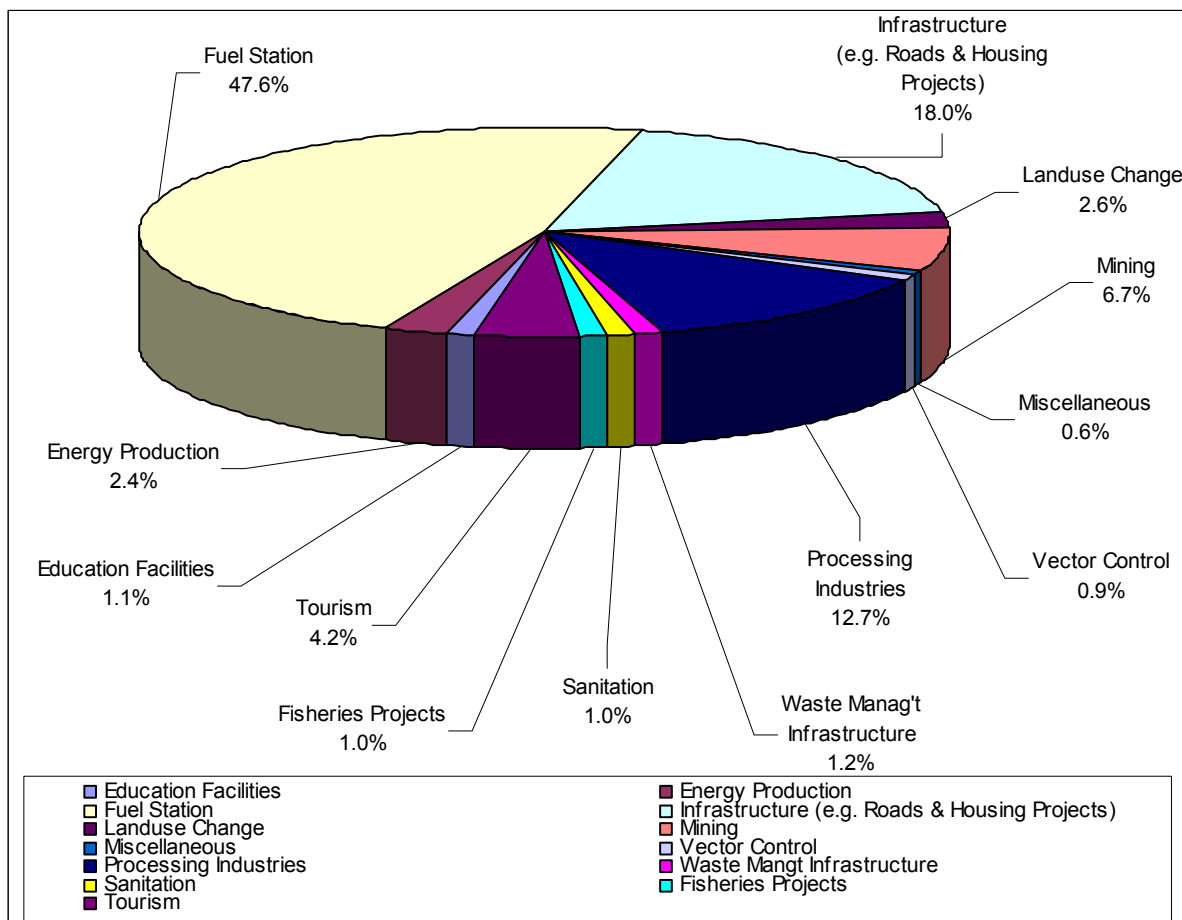
Figure 3: Total Number of Projects Reviewed by Year, July 1996 to June 2004
[Database *Record as at June 2004*]



n = 975

..... Projection including period July – December 2004.

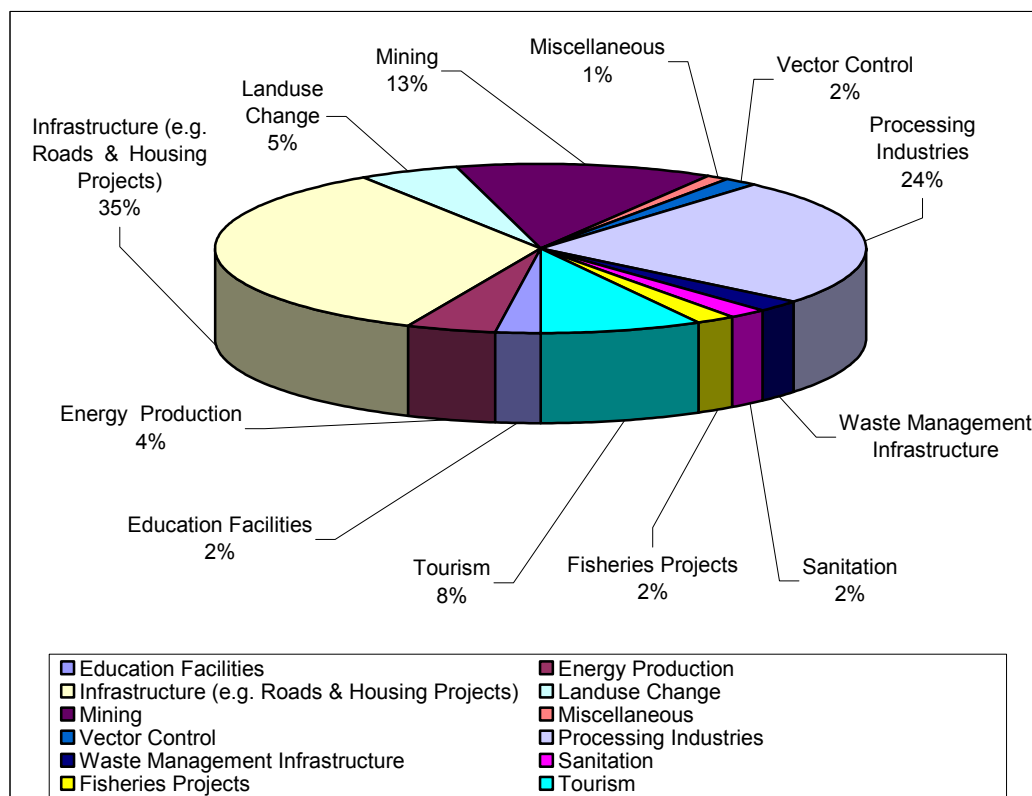
Figure 4: Percent Distribution by category of Projects Reviewed from June 1996 to June 2004



NOTE: The Legend denotes / includes the following:

- *Education Facilities:* Schools / educational infrastructure.
- *Energy Production:* Power generation (eg; hydropower projects, co-generation etc),
- *Fuel Stations:* Fuel (petrol, diesel, kerosene) filling stations and fuel storage facilities (depots, pipelines).
- *Infrastructure:* Transport and road projects, housing projects, and construction projects
- *Land-use Change:* Agricultural, livestock (including pasture), forestry, land reclamation, etc.
- *Mining:* Mineral exploration, mining, quarries, etc.
- *Miscellaneous Assessments:* e.g., Policies, Government Programmes
- *Vector Control:* Pest, disease, and vector control.
- *Processing Industry:* Processing, manufacturing industries, fabrication, cottage industry, etc.
- *Waste Management:* Waste management infrastructure (dump sites facilities, etc).
- *Sanitation:* Water (including water supply systems) and sanitation projects.
- *Fisheries projects:* Fish factories, fish farming/ponds, etc).
- *Tourism:* Wildlife, hotels, leisure parks and tourism facilities.

Figure 5: Percent Distribution by category of Projects Reviewed from July 1996 to June 2004.
[Excluding Fuel Stations]



5.1.1 Legal and institutional developments

The Major developments since operationalisation of the EIA requirements in Uganda have included the following, among others:

- (i) There have been changes and revision of some old sectoral laws and policies to include the requirement for Environmental Impact Assessment in nearly all the laws and policies that have been revised since 1995 when EIA became a legal requirement by virtue of the National Environmental Act, Cap153. For example, the requirement for EIA prior to implementation of new projects is now embedded in the Investment Code, in the Water Act, the Forest and Tree Planting Act, 2003 the Petroleum Supply Act, 2003, and in the Wetlands Policy, among others.

In addition to the above, the use and application of EIA has increasingly been adopted and institutionalized by sectoral Government Institutions and Departments. A number of sectoral agencies have, on their own, but with assistance from NEMA, initiated the preparation of sectoral EIA guidelines, and these include Uganda Wildlife Authority, Forestry Department, Directorate of Water Development, Ministry of Works, Housing and Communications and Ministry of Local Government.

NEMA has also provided support to other sectoral Government agencies to prepare their sectoral EIA guidelines and these include energy and mining, sectors whose sectoral guidelines have been finalized. NEMA has also initiated support to the agriculture and fisheries sectors to prepare their sectoral EIA Guidelines.

- (ii) Considerable progress has been registered in the development of manpower capacity for the conduct of EIA. This has gone through a number of critical paths that have included the following major phases:
- a. The initial phase that included the period when NEMA became fully operational in 1996 when nearly all EIAs were been done by International Consultants based on the understanding that there were no local experts capable of carrying out EIAs;
 - b. the intermediate phase (between 1997-2000) when a few local consultants began to get involved in conduct of EIAs though association with International Consultants;
 - c. the phase between 2000 – 2003 when there was a sudden surge in numbers of local EIA Practitioners who subsequently became dominant and largely operated and carried out EIAs on their own or in partnership with International Consultants; and
 - d. a more recent phase when certification and registration of EIA Practitioners has been legislated through The National Environment (Conduct and Certification of Environmental Practitioners) Regulations, enacted on 7th November 2003.

The number of persons and firms involved in EIA consultancy services has grown significantly over the last ten years and Uganda now maintains a database (Register) of EIA Practitioners who are involved in providing EIA consultancy services to developers requiring such services. Prior to the introduction of a new certification and registration system for EIA Practitioners in 2003, up-to 52 local firms and 6 international firms had been included in the NEMA EIA Practitioners register. Since the introduction of the new certification system, the old register was nullified and a new register is being developed and already contains 30 certified and registered Practitioners, while 26 additional applicants are to be certified after fulfilling all the requirements. It is expected that the number of certified and registered Practitioners will rise once many people become aware of the new certification and registration requirements.

One of the positive outcomes of the increase in the number of local EIA Practitioners is that the cost of carrying out EIAs has now dropped due to the inherent competition among the Practitioners. Before this drop in EIA fees, EIA was being perceived as a hindrance to development because of the high fees charged by the then few Practitioners.

It is noteworthy that while a few years ago developers had to come to NEMA for guidance on how to access EIA consultancy services each time EIA had to be done, this no longer happens as EIA Practitioners are readily available.

- (iii) The recruitment of District Environmental Officers (DEOs) in all districts and their subsequent training in EIA has increased Local Government capacity to contribute to EIA reviews. Prior to the recruitment of the DEOs, however, local Government input into the EIA process was basically nil as there was no direct office responsible for co-ordination of EIA review at that level.
- (iv) In order to improve on the quality of EIA produced, the National Environment (Conduct and Certification of Environment Practitioners) Regulations of 2003 have introduced a new element into the Uganda EIA legal and institutional structure where the private EIA Practitioners, through an independent EIA Practitioners Committee is now involved in certification of Practitioners based on their individual competencies and can also take disciplinary action against those who will be found to flout existing regulatory requirements for EIA practice in Uganda. The Regulations also define minimum qualifications and standards, which a Practitioner must fulfill before being certified and registered as an EIA Practitioner.
- (v) The concern for environment is now central in financing of development programs, including a requirement for EIA by banking and lending institutions before funding can be granted. Lending and acquisition of loans is now largely conditional upon fulfilling the EIA requirement.
- (vi) An Association of EIA Practitioners, the Uganda Association for Impact Assessment (UAIA) has been formed and was formerly launched in June 2001.

5.1.2 Adequacy of the legal and institutional framework for application of EIA in Uganda

Experience so far shows that the legislation on EIA, which includes the National Environment Act of 1995, the EIA Regulations of 1998 and the more recent National Environment (Conduct and Certification of Environmental Practitioners) Regulations of 2003 provide a sound legal basis to guide EIA use and application. The recent inclusion of the requirement for EIA in other sectoral laws and policies has further strengthened the legal and policy basis for EIA. What, however, appears to be a problem is not so much the content and provisions of the laws but institutional problems that have undermined the effective fulfillment of the legal provisions and the level of participation of various stakeholders as provided for in the legislation.

For example, while the legislation provides for full public participation, the reality has been that public intervention and participation on matters of EIA has largely been limited to a few keen NGOs and interested members of the public. This has also meant that in some instances the voice of these more active interest groups has been interpreted to mean the voice of the public even where the actual affected members of the public have a completely different opinion from that of the more forthcoming interest groups.

One of the most fundamental provisions of the Uganda EIA legislation is the need to involve lead agencies at various stages of the EIA process, including EIA review. To-date this provision has continued to be a pillar in implementation of EIA as lead agency feedback has continued to provide useful input to the EIA decision making process. However, this expectation has in some instances been undermined by lack of adequate staffing even where

the lead agency has commitment and willingness to participate. The coming into place of the EIA requirement did not find all the institutions ready to shoulder the new demands brought about by the legislation on EIA and it still remains a process to bring all the institutions to a level where they can adequately handle all EIA matters effectively. The need to avail manpower and staff time for EIA activities against other competing demands is critical especially given that the lead agency EIA review is regulated under a specific time regime of 21 working days within which comments must be received and lack of inadequate man power has in some instances constrained some lead agencies from meeting this time schedule.

5.1.3 Community and public participation in EIA implementation

Whereas the Uganda EIA system has been built around the initial start-up activities by the National Environment Management Authority, which had the responsibility to put in place an EIA system for Uganda, the functioning of the Uganda EIA system has progressed through increased stakeholder involvement that has been achieved through extensive awareness and training programs. These awareness and training programs have led to progressive increase in the level of stakeholder input and participation in implementation of the EIA requirements as manifested by the following:

- EIA and environmental issues in general are now a "hot" subject in the media and public debate.
- There has been an increasing demand by local communities and other interest groups for evidence of EIA having been carried out for new projects in their neighborhoods. Pressure from communities on environmental problems related to poor location of certain forms of development projects has led to planning authorities taking action against developers of such projects whose location and associated environmental problems has been challenged by local communities. Such projects have included quarries, new landfills for waste disposal, churches, disco halls and places of entertainment whose implementation has often caused serious social problems and must therefore first undertake EIA in consultation with communities likely to be affected. Citizens now exercise their right to demand for EIA as well as sue against developers whom they feel have not fulfilled the EIA requirement.
- Civil society pressure, especially through NGO advocacy for EIA on projects perceived to be likely to cause negative environmental impacts has of recent become a prominent element of the Uganda EIA system. This pressure has meant that the rights of affected communities on matters such as compensation and resettlement are now on the forefront for discussion through EIA. This pressure is also mounting especially where certain forms of developments are seen to encroach on sensitive ecosystems such as forests and wetlands and modifications on some projects have had to be made as a consequence of this pressure. As an example, the Kalangala Oil Palm Project which had been planned to be implemented in gazetted Forest Reserve could no go ahead partly as a result of civil society pressure and it was not until land was acquired out of the Forest Reserve that the project went ahead.
- As a result of recent debates associated with some very controversial projects where public input was necessary to aid the EIA decision making process, there has been

increased public awareness as local communities in the project areas and the general public have been able to experience and participate on matters that previously were perceived as the exclusive preserve of the regulatory authorities and the developers. An example of this was the recent debates associated with hydropower development projects and the Kalangala Palm Oil Project.

5.2 Relative cost of the EIA process.

It has been difficult to establish how much an EIA costs relative to the total cost of the project for which an EIA has been done. This is largely because this has remained a negotiated settlement between the developer and the Practitioners offering EIA services. The price is therefore largely variable depending on the experience of the consultants and his/her negotiating skills. In the recent past, the increase in the number of consultants has also contributed to lowering of EIA fees due to increased competition. It should be noted, however, that there has been a tendency for International Consultants to be paid very high EIA consultancy fees compared to their local counterparts. Thus, where an EIA done by an International consultant could go for US\$ 50,000 to US \$ 100,000, a local consultant could easily be paid from US\$ 5,000 to US\$ 10,000 for the same job. Overall therefore, the level of EIA fees charged by local consultants is not prohibitive to the conduct of EIAs and this perhaps explains the fact that there has not been much complaint with regard to this particular issue. One can also safely say that the proportion of EIA fees relative to the total project cost has not been prohibitive to investment, and it is evident that the entire EIA fees structure has been generally modest compared to the cost of investment.

One element of the EIA fees structure is the mandatory fees paid for administration of the EIA of the EIA process as provided for in the EIA Regulations. The Regulations provide for a fees schedule as indicated in Annex 3.

5.3 Constraints, challenges and opportunities

The implementation of the Uganda EIA requirements has certainly not gone without challenges. Among the key challenges are the following:

5.3.1 Effectiveness of public participation

While it is acknowledged that the Uganda EIA system has provided room and opportunity for public participation, there remains a challenge of ensuring that the public actually takes full advantage of the opportunity afforded to them to participate and make a contribution through the EIA process. Among the emerging shortcomings of public involvement in the EIA process are the following:

- There has been a tendency for the views of the directly affected or the silent majority to be overshadowed by the more vocal and more influential members of the public. Thus, in some instances, projects which are actually supported by local communities have been portrayed by some more vocal opinion groups as not being welcome by the same communities. Getting the “real views” and opinion of the affected public has often been a problem especially when such a group does not come up to express their views. This sends a distorted message simply because the actual affected community is either disadvantaged or has not had a good forum for expressing their case. The methods and mode of soliciting views and ensuring that such

communities actually do participate in EIA discussions still requires tremendous improvement. For example, during the review of the EIA for the palm oil project on Bugala island, there was a loud impression given by some groups to the effect that the people of Bugala island did not want the project. However, all communication obtained from the local people indicated that they were actually in support of the project.

In addition to the above, it is also a reality that sometimes the real affected public and communities are not mobilized enough to speak out and champion their cause against the opinions of those who may claim to speak on their behalf. This gives the impression as if it is the EIA process that should get down to **mobilize** the public to cause them to speak out even when the EIA process has given opportunity for their participation. Hence, sometimes what is perceived as weaknesses in ensuring public participation in EIA is actually lack of mobilization of the affected public to participate. It of-course begs the question whether it is the duty of the EIA process to actually get down to mobilization of communities rather than merely avail them the opportunity to participate. **This issue requires further debate.**

- It has not been always possible for public views to influence the design of some projects and gives the impression that public participation actually ignores public views. However, it also remains to be seen to what extent any one EIA, especially where opposing views are presented can actually ensure that all the views presented are taken into consideration.

As far as effectiveness of public participation is concerned, there is apparent variability depending on the stage of involvement:

Stage of involvement	Nature of Involvement	Remarks	Evaluation of effectiveness
Public involvement during the project conceptual and planning stages and before actual conduct of EIA	Informing/notifying the public about a proposed project and seeking their views	Most developers do not seem to appreciate the value and need of seeking any public opinion about their "private" developments and most often even communities near the project site will not know about an impending development not until planning is in very advanced stages.	Public involvement at this stage is very minimal and hardly sought for by the developers.
Public involvement during the conduct of the EIA	- Participation in scoping exercises -Participation in open public meetings and public hearings on project	- Where a project being subjected to EIA is highly of a technical nature, the scope of public involvement is often undermined by limited public knowledge of issues involved. Developers sometimes do not see the need to consult the public because they perceive the issues to be beyond the understanding of such public. This too limits the extent to which public involvement is deemed necessary.	The choice of the most "critical" public to consult has often been a limitation to involvement at this stage. While public participation is provided for, passive attitude by the public has meant that only a few vocal NGOs and interested member of the public actually do participate.

Public participation during EIA review	<p>-participation through providing written or verbal comments on EIA reports</p> <p>- making relevant EIA documents available to any interested members of the public in specified places</p> <p>-Participation in public hearings</p>	<p>- Some EIAs are written in highly technical language difficult for the general public to comprehend.</p> <p>To-date forums that have given opportunity for the public to participate in public debates on EIAs have attracted the same faces. This implies that while we seek to interest the rest of the public, public participation seems to zero down on individual interest on the subject under discussion rather than necessarily the availability the opportunity.</p>	<p>The means of making EIA documents available for public scrutiny is not adequate given that places of safe display are not necessarily readily available.</p> <p>Attempting full public disclosure among an uninterested public may make EIA review more expensive for no added value. It remains a challenge to interest the public to participate and to use the best method to make them participate</p>
Public participation during and after decision making	<p>- Communicating the outcome of EIA decisions to the public</p>	<p>In order to inform the public on the nature of decisions taken on EIAs, and especially after their participation at earlier stages of the EIA process, participation at this stage would minimise public suspicion on the decisions taken.</p>	<p>There is limited disclosure of decisions to the public. The Administrative demands of disclosure and public involvement at this stage are constrained by man-power demands on the often ill-staffed EIA sections.</p>

While these shortcomings in getting the public to participate in EIA are noteworthy, it should be pointed out that views expressed by the public have nevertheless largely been instrumental in causing some major modifications in some projects. Some of the noteworthy cases are the following:

- Public opposition to the use of chemicals to control water hyacinth led to abandonment of that option,
- The option of implementing the Bugala Palm Oil Project within gazetted Forest Reserve land had to be abandoned partly due to heavy public criticisms of this option.
- A quarry at Mukono which did not fully take into account the concerns of the public expressed during the EIA had to be abandoned when the public “took up arms” to protest exposure to unbearable vibrations, flying stones, dust and noise generated by the quarry. However, the same quarry is now being operated by a number company but in compliance with the demands of the local community over the above stated issues.

5.3.2 Need for increased contact between managers of EIA process and Developers

With the increase in the number of EIA Practitioners, there has developed a problem to the effect that the communication between NEMA and developers has been severely curtailed, implying that developers are not able to access free advisory services on specific EIA matters regarding their projects. This has also meant that developers sometimes have to pay fees to carry out EIA for projects whose environmental concerns could readily be addressed by the developer without need for hiring consultancy services. This also means that one of the main pillars of the Uganda EIA system which calls for EIA to be done by the developers has to some extent been undermined as it is now assumed that all EIAs have to be carried out by Consultants and at a fee. This challenge calls for further awareness creation among the developers.

5.3.3 Availability of adequate man-power to administer the EIA process

Related to the issue of ensuring public participation in the EIA process, the other problems are directly related to the number of people administering the process. For example, while a team of one hundred people employed to administer the EIA review process up-to disclosure of all decisions taken may be more effective, a team of 4, as is the case in Uganda's NEMA for example, could find some problems in achieving the same level of effectiveness. The levels of man power deployed on EIA plays a significant role in the extent to which all the requirements, such as for public participation in EIA may be fulfilled. As we review EIA application across the continent therefore, this man-power factor must be seriously reviewed in as far as it could undermine the effective operationalisation of the EIA process. On a personal note, having presided over the Uganda EIA process for some time, we could probably have developed more on EIA with a team of not less than 10 persons at NEMA alone. To-date, however, we have only 4 people manning the EIA desk. As we proceed with the EIA review process, it might be useful, for example, to document the levels of man-power deployment at the agencies such as NEMA that are mandated to administer the EIA process in each Country, after-all we cannot get the results without the people. The big question therefore is whether or not numbers of technical man power to administer the EIA process in the different countries across the continent (which in itself is a function of financial resources) is not a hindrance to effective fulfillment of all the requirements for EIA. As one very experienced person on EIA matters said on NEMA's EIA team: "I think you guys need more staff in your EIA Department. There is only so much one can do".

5.3.4 Challenges of Post EIA monitoring and implementation of mitigation measures:

Because of the need to determine whether the actual implementation of projects subjected to EIA fulfils the predictions and recommendations made in the EIAs, there remains a challenge to ensure that developers use the EIA reports as a basis for environmentally sound implementation of their projects. During inspections carried out for enforcement, it is not uncommon to find that some developers or managers of projects for which EIA was done do not even know where the EIA reports are. Under such circumstances, EIA does not have an opportunity to influence project implementation. This situation is further complicated by the fact that in certain instances, the developers take advantage of

weak enforcement capacity by different levels of enforcement to omit some of the critical recommendations of EIA.

- 5.3.5 Quality of EIAs produced:** There is concern about the quality of EIA reports produced and submitted for approval. This is mainly arising from the fact that whereas NEMA's primary area of focus was initially in encouraging as many individuals as possible to participate in carrying out EIAs, the increased number has also brought with it inexperienced Practitioners whose quality of work leaves a lot to be desired. One of the very noticeable weaknesses in the quality of EIAs produced is in alternatives analysis, principally arising from the fact that most projects subjected to EIA are tied to a specific site with no room for exploring other alternative sites.

The putting in place of a Code of Conduct for EIA Practitioners is in part meant to address this concern as this has set minimum standards which every Practitioner must meet before being allowed to carry out EIAs.

5.3.6 Recognition of the value of EIA as a planning tool

One of the major areas of weakness in the use and application of EIA still remains the fact that most developers have not yet appreciated the real value of EIA as a planning tool and only do it to fulfill a legal requirement. In the recent past, EIA is also being done by some developers only as a last resort and as a last minute attempt to catch up with deadlines for other interests such as securing loans. As a result, there is still persistent separation of the conventional project planning process, which looks at other financial and technical aspects of a project during planning from the actual conduct of EIA which is only considered when the developer has got some pressure to do it. As a consequence, the extent to which EIA is being applied as part and parcel of the overall project planning process is far from satisfactory. To-date most developers still reluctant to try to do EIA for their projects, even for very straight forward cases.

5.3.7 Use and application of EIA after project development has commenced

Whereas the Uganda EIA process emphasizes that EIA should be done before actual project implementation starts, cases of EIA being done during initial phases of project implementation continue to be registered. As a matter of fact, some EIAs done at this stage seek to use EIA to justify the mistakes that have already been made. This risks associating EIA with such mistakes, thus casting doubt on its values among the public. Under these circumstances, EIA does not have the opportunity to address some of the impacts that would have been avoided if it had been done before commencement of project implementation.

5.3.8 EIA often mis-understood to solve all problems

Another major challenge in the use and application of EIA arises from the common misunderstanding of EIA as being a "magic tool" which settles all problems even when there are other options for decision making. EIA has not been understood as being simply one among many environmental management tools whose contribution is only complimentary to other tools such as laws, policies, standards and

regulations. Quite often there have been development issues for which decisions could have been taken within the framework of other sectoral laws and policies but still end up being referred for EIA knowing very well that EIA would not justify the proposed actions.

As an example, a project seeking to cut forest vegetation in a gazetted Forest Reserve to plant cadamon crop openly violated all forest management principles and the then Forest Department could have taken a decision not to allow the project based on the rules and regulations governing activities in Forest Reserves. However, the Department instead advised the developer to carry out EIA knowing very well that the project not welcome. Indeed after the EIA was done the Forest Department indicated during review of the EIA that the developer should implement the project outside the Forest reserve. Likewise, there have been infrastructure projects proposed in gazetted green spaces in urban centers and which projects could have been disallowed by the urban authorities straight away by virtue of violating the planning provisions for such areas but these too are referred for EIA knowing very well that EIA cannot justify the setting up of such project in gazetted green spaces. Quite often this tends to generate a dislike for EIA among the affected as they perceive it to have been the cause of non-approval of their projects.

6.0 CAPACITY ISSUES, NETWORKING AND CO-OPERATION

6.1 Key capacity issues in the application of EIA

Given that by 1996 the level of awareness and technical expertise in EIA in Uganda was very negligible, it is prudent to say that tremendous success has been registered in the area of EIA capacity development and awareness creation in Uganda. For example, while by 1996 it was difficult to obtain lead agency review feedback on EIA reports sent to them for their review, the level of feedback is now satisfactory and has greatly boosted the EIA decision making process. In addition, while by 1996 EIA training and capacity development was undertaken almost exclusively by NEMA and Makerere University Institute of Environment and Natural Resources, to-date EIA training has been integrated into curricular of many tertiary institutions.

6.1.1 Key capacity building needs

Among the key capacity building needs for EIA are the following:

- There is need for further development of Sectoral EIA Guidelines to guide the review and conduct of EIAs for various sectoral development programs and projects,
- The target groups for EIA awareness creation, capacity building and training keep emerging and "shifting" thus calling for more targeted capacity building programs. For example, while sensitization on EIA had been done for most of the elected leaders prior to 2001, the new legislators and policy makers elected in mid 2001 have to be sensitized on the EIA requirements. Banking/lending institutions have also expressed need for their staff to be sensitized.

More training and EIA capacity building programs are required for staff of Central Government Ministries and Departments and also for the staff of the decentralized District local Governments and local Councilors who are key decision makers at various levels.

Because of the need to develop appropriate EIA skills across all stakeholders involved in the EIA process, other stakeholders for which EIA capacity needs to be further developed include:

- Staff of Municipalities and other local authorities,
 - Journalists, and Public Awareness Officers,
 - Parliamentarians and policy makers at various levels,
 - Staff of banking and lending institutions.
- The place of Environmental Economics in EIA needs to be developed as well as skills for valuation of natural resources against proposed development options. This would assist in improving the assessment and evaluation of development options against the environmental costs to the resources to be impacted upon by such developments.

- EIA Practitioners involved in carrying out Environmental Impact Assessments have not received sufficient attention as far as NEMA's current capacity building efforts are concerned. This is partly because Practitioners were perceived to have capacity to pay for their training needs through courses offered by other institutions such as Makerere University Institute of Environment and Natural Resources (MUIENR). However, the quality of EIA produced by some of the Practitioners clearly points to a need for training.
- Officials from municipalities responsible for urban development planning also require training on EIA as their planning decisions have of recent suggested that the extent to which environmental issues are taken into consideration in urban planning is limited. In urban areas there are common cases of very serious land-use conflicts which could have been avoided through use and application of EIA.
- The use and application of EIA for addressing management concerns for shared ecosystems and developments with a likelihood to pose trans-boundary environmental problems needs to be developed. An initiative aimed at addressing this concern is ongoing and being championed by the African Center for Technology Studies (ACTS) Nairobi, and coordinated under the auspices of the East African Community.
- Strengthening of EIA networks for information exchange could also enhance capacity building in EIA. In this regard, strengthening of the existing National Association for Impact Assessment and the regional EIA network - the East African Association for Impact Assessment - would assist complement ongoing national efforts at EIA capacity building.
- **Need for standardization of EIA training curricular**

Whereas EIA training is now being undertaken by many training institutions, the need for standardization of EIA training curricula is required. There is plausible reason to believe that the level of training on EIA given by the different institutions varies extensively and this raises a danger of creating different perceptions about what EIA can do or cannot do.

- While the potential for formal EIA training at Universities exists, this needs to be expanded and strengthened as the depth and frequency of formal EIA training to date has been low. There is a clear need for more formal EIA training centered around existing training programs such as the one recently introduced by the Makerere University Institute of Environment and Natural Resources.

6.2 EIA capacity building initiatives

6.2.1 EIA capacity building initiatives by NEMA

In order to be able develop the desired public and inter-agency participation in the EIA process, it was critical that EIA capacity and institutional development among the stakeholders be such that they were brought to a level of capacity where they would be able to participate and play a meaningful role in EIA implementation. By 1995, however, this capacity was near nil. This therefore meant that the initial focus of NEMA's activities had

to be on EIA institutional and capacity development geared towards first developing and strengthening institutional capacity among EIA stakeholders as a basis for making the EIA system work.

As part of its efforts to build and enhance capacity for EIA among various stakeholders in Uganda, NEMA has and is still carrying out a series of EIA training and awareness activities for the following categories of stakeholders:

- i. Staff of central Government Ministries and Departments,
- ii. Officials from districts, including political leaders and technical staff responsible for district development planning,
- iii. staff of selected NGOs and the private sector involved in development work on various kinds of projects.

Through these capacity building programs, NEMA has been able to develop the critical mass of expertise necessary for implementation of the main elements of the EIA process, including:

- EIA review,
- Contribution to the EIA decision-making process,
- improved public involvement and advocacy for EIA as well as ensuring public involvement and participation.

Specifically on lead agencies, NEMA is developing the capacity of lead agencies and the private sector, to empower them to monitor, regulate and manage the EIA process for projects affecting the segment of the environment they are responsible for. Training in EIA has been carried out for the 21 focus lead agencies to enhance integration of environment in their plans and programs, and so far seven lead agencies have been assisted to develop sectoral EIA guidelines.

Environmental education, including aspects of EIA has been integrated in the curriculum of tertiary institutions, including three government universities and several private universities.

6.2.1 EIA capacity building initiatives by Academic institutions

The Makerere University Institute of Environment and Natural Resources continues to play a key role in EIA training and currently offers a one-year Post Graduate EIA course targeting degree holders and EIA Practitioners. The Institute is also in the process of designing a shorter certificate course on EIA.

In addition, in 1997, MUIENR was designated as the focal institution for testing and trialing of the United Nations Environment Program (UNEP) EIA training resource manual. This exercise was successfully carried out in conjunction with NEMA.

Other EIA training programs are being offered by Makerere University Faculty of Arts and Zoology Department, among others.

6.2.3 Other capacity building initiatives

Besides NEMA and the academic institutions, the National Wetlands Program in the Ministry of Water Lands and Environment has been championing EIA capacity building as a tool for better management of wetland resources.

6.2 Membership/Association with EIA networks

To-date the Uganda Association for Impact assessment is the only recognized membership association for EIA in Uganda. The association is closely associated with the East African Association for Impact Assessment whose operations are currently being supported by the Regional office for the International Union for Conservation of Nature (IUCN), in Nairobi Kenya. Plans for affiliating both associations to the International Association for Impact Assessment (IAIA) are underway.

6.2 Development partners in EIA

The development of the Uganda EIA system has benefited from support from a number of key partners that have included, the World Bank that has supported NEMA to implement the Environment Management Capacity Building Project (EMCBP) since 1995. This project has included a major component on EIA capacity building including the ongoing development of EIA sectoral guidelines and training programs for central and local Government staff.

Support has also been got from the United Nations Environment Program (UNDP) and the United States Agency for International Development (USAID) both of which provided support to the preparation of the Uganda EIA Guidelines and have continued to offer training support to Ugandan EIA Practitioners and managers of the EIA process. The contribution of the USAID Regional Office for Africa based in Nairobi is acknowledged in this regard. USAID also supported a three year environment capacity building activities through a program executed by Associates in Rural Development - Conserve Biological Diversity for Sustainable Development (ARD-COBS) Program and this included EIA training for the four districts of Bushenyi, Kanungu, Kisoro and Rukungiri in South Western Uganda.

The role of IUCN in providing technical support for EIA capacity development and in local and in mobilizing regional expertise through the formation of the regional EIA association has been instrumental in capacity development. The Swedish International Cooperation Agency (SIDA) is acknowledged for its continued support to a number of Ugandans to access training programs on aspects of EIA. Uganda has also been able to benefit from participation in international programs organized by IAIA, most notably the annual conferences of the association.

The role played by the local NGOs in highlighting public concerns on EIA matters has been instrumental and in particular the contribution of the following NGOs is acknowledged, namely; Greenwatch Uganda, Action Coalition for Development and Environment (ACODE), Uganda Wildlife Society, Nature Uganda and the National Association of Professional Environmentalists.

The contribution of academic institutions, notably the Makerere University Institute of Environment and Natural Resources and faculty of Arts, Geography Department, in EIA capacity development has been very instrumental in complimenting the efforts of NEMA in this endeavor.

6.5 Status of SEA development in Uganda

It is largely recognized that the use and application of Strategic Environment Assessment (SEA) for evaluation of environmental consequences of major development plans, programs and policies needs to be done in a similar manner that EIA evaluates the environmental consequences for projects. In June 2003, NEMA embarked on the process to develop Guidelines for Strategic Environment Assessment. However, initial attempts to review the draft SEA Guidelines so far produced show that the subject (SEA) and the mode of its application is far from being understood, partly as a result of no real experience on the subject in Uganda. Thus, apart from the efforts to put in place the SEA guidelines, there has been limited experience with its applications and it is therefore safe to say that as far as SEA is concerned, no major developments in terms of its applications have taken place and any assistance that can be availed to assist Uganda develop its SEA capacity will be very welcome. There is therefore a clear need for capacity to be developed for Strategic Environmental Assessment (SEA), and yet internal experience in this area is still limited.

Notwithstanding the above, a number of Government programs have recently initiated the integration of environmental assessments within the broader framework of their development. Such programs have included the Plan for Modernization of Agriculture, the Northern Uganda Social action fund (NUSAF), among others. Lessons learnt from these programs will be invaluable in the further efforts to develop SEA in Uganda.

7.0 SUCCESS STORIES / BEST PRACTICES AND LESSONS LEARNT

7.1 Lessons learnt

7.1.1 Role of EIA in Decision-making

While EIA is now largely recognized as a good basis for taking decisions on development activities likely to affect the environment, it should be pointed out that there have been a number of cases where projects implemented without EIA have had to pay a heavy financial cost for taking corrective action on aspects which would have been avoided if EIA had been done. Examples of these include, among others:

- Kampala parents school which had constructed a multi-storied classroom block below a 132 KV hydro-electric power transmission line which had to be relocated at a cost worth several hundred million shillings,
- A car show room at Seeta Kampala where a concrete foundation was already completed but the project was discontinued because it was located in a wetland,
- A fish factory at the shores of Lake Victoria which was to be constructed very close to the shores of Lake Victoria in violation of the Regulations on Lake shores management and without EIA having been done. The developer had to demolish an initially constructed perimeter wall worth millions of shillings and shift the factory outside the regulated zone.
- An abattoir at Kajansi which was constructed in a wetland at a cost said to be 26 million Uganda shillings but has not been allowed to operate since the developer had been informed in time through preliminary assessment that it was illegal to construct an abattoir in a wetland.
- A petrol station whose construction was near completion at a dangerous road bend along Kampala- Entebbe highway whose operation had to be dis-allowed as it would increase risk of road accidents. The developer had been advised early enough not to proceed with the project but ignored the advise. However, no sooner had the petrol station started operating than the road agency in-charge of road safety came and sealed it off not to allow any access by vehicles. The project was then abandoned with heavy loss of investment capital (Plate 1).

On the contrary, where EIA has been done in time, it has been able to save developers from potential financial loses if the same developments had gone a head without initially carrying out EIA. In addition, where EIA has been done in time, it has helped to improve siting of projects that would otherwise have been poorly located in sensitive areas such as wetlands or industrial projects proposed in residential areas. Examples of these are indicated in Annex 2.

Plate 1: A petrol station along Kampala-Entebbe road, whose developer ignored advise against locating it at a dangerous corner but had to abandon it after stoppage by the roads agency.



Above: The yellow arrow indicates metal grills put by the Road Agency to stop access to the fuel station. **Below:** The abandoned fuel station structures with a would be fuel pump in the foreground indicated by yellow arrow. **Photographs taken (28/7/2004)**



- The increase in the number of EIA Practitioners brought with it the problem of inexperienced Practitioners. This led to many EIA reports becoming mere replications of soft copies of previous EIAs with gross effect to the quality of EIAs produced. It is for this reason that the Government of Uganda decided to introduce the National Environment (Conduct and Certification of Environmental Practitioners) Regulations of 2003 that imposed a certification and registration system seeking to regulate those involved in EIA based on their respective competencies.
- One of the biggest lessons so far learnt in the implementation of the EIA requirements in Uganda is the apparent emphasis by EIA Practitioners on financial gains which has undermined their role in providing advisory services and guidance to developers during the time of carrying out the EIAs. As a matter of fact, the emphasis on financial gains at the expense of the purpose and intent of EIA is one of the very serious concerns undermining the value and quality of EIAs. It has been noted that some Practitioners even advise some developers, especially those whose projects would most likely not be approved for some obvious environmental concerns, to go ahead to start development, knowing very well that NEMA would in similar instance require the developers to seek other alternatives. This has often led to serious loss of finances to such developers when their projects are stopped.
- In the implementation of EIA requirements so far, it has also emerged that whereas large-scale project developers are to a great extent complying by carrying out EIA for their projects, there still remains a big problem in recognizing the value of EIA for small-scale projects. Developers of small-scale projects do not perceive EIA as adding value to their limited investment capital and often ignore EIA and yet its contribution to their project implementation would equally assist in avoiding obvious environmental problems associated with such small-scale projects.

A typical example of this is indicated in Plate 2 and involves a small scale project processing blood in the outskirts of Kampala for supply to producers of poultry feeds. This activity led to public outcry as it was being done in a residential area and the public demanded immediate intervention by NEMA. On subsequent inspection of the project site, it was found out that there were even more environmental concerns besides mere location in a residential area. These included:

- (i) Processing of blood was being carried out in the open and run-off after rains is carried into the neighbourhoods causing Pollution of a stream lower down which is a potential health hazard for water users downstream;
- (ii) Use of used tyres as a sources of fuel thereby generating potentially harmful smoke emissions and thus exposing the workers and local residents to dangerous combustion fumes and risk of causing respiratory ailments and other health problems;
- (iii) Exposure of workers to occupational health hazards and working conditions without any efforts to provide protective gear;
- (iv) Poor waste and sanitation management with a channel dug for discharging the untreated effluent into the adjacent stream/wetland;

- (v) The activity generated foul smell and was thus a nuisance to the neighbouring community.

All these concerns would have been addressed if EIA had been given a chance to make a contribution through suggesting better ways for environmentally sound implementation of the project. This otherwise good project had to be closed when the developer failed to find alternative fuel source on account that other alternatives were expensive and also failed to put in place sound environment management practices.

Plate 2: A typical small-scale project involved in processing of blood for chicken feed but not subjected to EIA



Above: A pit for storing blood (approximately 2m x 4m).

Below, The blood is poured into a drum on the right (yellow arrow) for boiling with a worker directly exposed to smoke from burning tyres. **Photographs taken 08/6/2004**



- From the review of the EIAs it is clear that the identification and analysis of impacts during the assessments has not been done to satisfaction by all Consultants involved in the conduct of EIAs. Quite often, impacts have not been adequately qualified in terms of significance. This has therefore not enabled the assessments to focus on issues and interventions on significant impacts.

In addition, most mitigation measures and impacts analysis are presented in a manner that does not commit the project developers to implement them, but are mostly presented in recommendation form. For example, most EIAs would present mitigation measures as follows: "...special attention will be paid to the presence of habitat specialists ..." or "...the developer will leave small patches of natural vegetation ..." or "...the tree/plant species that are important for butterfly conservation will be protected from pesticides/herbicides..." This itself has some shortcomings in that the developer sees these as mere proposals and not something he/she is bound to implement.

7.2 EIA best practice: the example and case of the EIA for the water hyacinth control program in Uganda.

In 1997, the Government of Uganda was confronted with a huge problem of water hyacinth (*Eichhornia crassipes*) infestation in Uganda's water bodies. The problem reached such alarming proportions that water transport was threatened, hydropower installations and power production were threatened, and the fisheries of these water bodies were equally threatened. In order to deal with the problem, the Government proposed three control options to be applied, namely Biological control, physical control (mechanical and manual) and chemical control using Glyphosate of 2,4-dichlorophenoxyacetic acid (2,4-D) and Diquat. The proposal to use chemicals particularly sparked off such a controversy that the public demanded that a comprehensive Environmental Impact Assessment be done, as a must, to evaluate the three control options as well as the efficacy of the chemicals that were proposed for use in water hyacinth control.

EIA process.

The EIA for this water hyacinth control options went through the flowing key stages:

- (i) Like all other EIAs, the scoping process was carried out involving as many key stakeholders and an expanded scoping committee was formed to define the scope of the EIA. A scoping report was produced and agreed upon as the blue print upon which the EIA would be based. A team of high level experts drawn from the academia and research institutions was put in place to conduct the EIA and also carry out efficacy tests on the chemical control option.
- (ii) After completion of the scoping exercise, the EIA study protocol was developed and included description of the procedures that would be used for public consultations as well as for carrying out the experiments on various aspects of chemicals, including:
 - Efficacy
 - Toxicity to aquatic organisms such as fish,
 - Persistence in the environment (aquatic system), and
 - Safety to humans.

- (iii) The EIA study involved wide consultations with all the stakeholders including the local authorities in the riparian areas to the lakes. The EIA also involved carrying out chemical efficacy tests involving the following:
- Laboratory tests on the three herbicides conducted at Kituza Agricultural Research Station Mukono,
 - Pond Trials conducted at Kajansi to simulate lake-type environment, and
 - In-lake herbicide trials conducted in a closed bay at Wazimenya in Lake Victoria

EIA Review process

When the EIA was concluded, the ministry responsible submitted the final report top NEMA for review in consultation with all other relevant stakeholders. As required by the provisions of the law, the Environmental Impact Statement was circulated widely to the different stakeholders that included the following:

- (a) lead agencies for review over a 21 day review period. At the conclusion of the 21 day period, NEMA had received diverse comments on the various control options.
- (b) In fulfillment of the National requirement for full public participation in the EIA process, NEMA decided to give a further opportunity for public review of the EIA in order to get comments of the wider public in addition to the lead agency comments. The EIS was deposited in some strategic public libraries to allow public access over a 28 day period and these included:
- NEMA Library,
 - Makerere University main Library,
 - Makerere University Institute of Environment and Natural Resources library,
 - Kampala Public Library,
 - Kampala City Council Library
 - Offices of the District Environment Officers in the Lake Victoria catchment Districts.
 - Uganda Wildlife Society offices (NGO)

In addition to these, information was also availed to the public through radio programs and a summary of the water hyacinth control elements was prepared by the Ministry of Agriculture Animal Industry and Fisheries and posted as inserts in each copy of two of the daily news papers as a way of broadening dissemination of information to as many members of the public as possible. The public was invited to submit written comments in addition to being invited to participate in the public hearing.

Further to the above, a public hearing was convened on 30th July 1997 and all stakeholders, including Government agencies, the general public, riparian district authorities, donor agencies and NGOs were invited to participate.

During the public hearing, the Ministry of Agriculture presented the Environmental Impact Statement and the public was given another opportunity to present their views publicly

regarding the proposed water hyacinth control options. Altogether a total of 460 persons turned up for the public hearing which lasted over 8 hours. In addition to these there hundreds of written responses and opinions from the public which were incorporated as part of the feedback during the review process. Of the 460 persons, only four out of the so many contributors presented views in support of the use of herbicides for water hyacinth control while the rest were opposed. The full report of this public hearing is still available in NEMA library for public reference.

- © the review process also involved review of the EIS by the statutory EIA Technical Committee that held a series of independent review meetings and came up with technical advice to NEMA on various aspects of the proposed water hyacinth control options.

Decision making

At the end of the review process as described above, NEMA collated all the public, lead agency views and the EIA Technical Committee input and took a decision on 11th September 1997 to allow two water hyacinth control options to go ahead, namely the Physical control option (mechanical and manual) and biological control, while the chemical control was not permitted. The full text and rational for NEMA's decision is reproduced here in as Annex 4 for reference.

As it turned out from the review comments, there was wide objection to the chemical control option especially in as far as the reviewers felt that it could threaten public health, threaten fish exports and also other non-target biodiversity resources.

Key lessons form the EIA for the water hyacinth control programme.

- By involving the public and as many stakeholders as possible, and by widely publicizing the EIA process, there was general increased awareness on the existence of the legal requirement for EIA for all projects, including those conceived by the Government itself.
- Public opinion and input during the EIA process was able to influence and contribute to the nature of the decision that was eventually arrived at the conclusion of the EIA process.
- This particular EIA gave some credibility to the EIA process in that it showed that NEMA, as the approving government authority, did succeed in taking an independent decision without Government interference even in this case where Government, through its Ministry of Agriculture, Animal Industry and Fisheries, had direct interest in the various water hyacinth control options that had been subjected to EIA.
- This particular EIA also illustrates that the Uganda EIA process takes into consideration and integrates the ecological, social, health as well as economic dimensions.

8.0 CONCLUSION AND RECOMMENDATIONS

8.1 Concluding remarks

Overall, the Uganda EIA system has progressed from a level of infancy by 1995, where EIA was largely considered to be new and less understood, to a stage where it is now well established and widely applied to evaluate environmental aspects of development activities. A number of critical ingredients of a functional EIA system both in terms of man-power and institutional development are now in place and are further being developed. The level of awareness on EIA has increased and stakeholder input and participation is largely forthcoming compared to a few years ago.

Notwithstanding these milestones, there are still a number of areas where further effort is required to make EIA serve its rightful place as an aid to environmentally sound planning. These include need for further strengthening of institutional structures covering all the central and local Government linkages built within the EIA implementation framework. This strengthening calls for more awareness and training, and more effort to make developers appreciate the value of EIA as a planning tool.

As Uganda embarks on its efforts to develop a framework for Strategic Environment Assessment, and considering that local expertise and experience in this area is limited, it might be useful to consider regional initiatives targeted at providing more opportunity for sharing of experiences and expertise as a way of assisting countries with less experience in SEA application.

8.2 Recommendations

The development of a national EIA system is a huge task and after 8 years of implementation, it is necessary that its application be evaluated for purposes of fine-tuning it to render it more effective for environmental planning. In view of this, it is hoped that the weaknesses and challenges identified in this report shall form the basis for such an evaluation.

- There is need for more awareness creation among developers and the public at large on the advantages and values of using EIA as an aid to environmentally sound planning as well as the value and contribution of EIA to environmental and social well being. All effort should be made to avoid using EIA for justifying mistakes that have already been committed for projects whose implementation has already started.
- Alongside awareness creation about the EIA process, more work needs to be done to improve the mode and mechanisms for public participation in the EIA process, especially among those communities most likely to be affected by the proposed development activities. It is the considered opinion that in order to enhance public participation in the EIA process, there is need to perfect the methods used for soliciting public views on EIA matters, including choosing the best method for public participation, document review and display methods, method of media invitation of comments and views, identification of the critical members of the public to be consulted, among others. The need for more enhanced public participation in the EIA process cannot be over-emphasized especially considering that overall, the participation of NGOS and other more active members of the

general public and interest groups has been a more useful development that has enabled wider stakeholder participation in EIA than would otherwise be possible.

- In view of the ever emerging capacity building challenges, there is need to develop specialized and structured EIA training programs for Practitioners based on practical case studies and good lessons learnt. Training of Practitioners could also enhance competence and hence improve quality of the assessments.

There is still need for further development of EIA capacity and awareness within both central and a local Government levels, as well as in the private sector in all elements of the national EIA system.

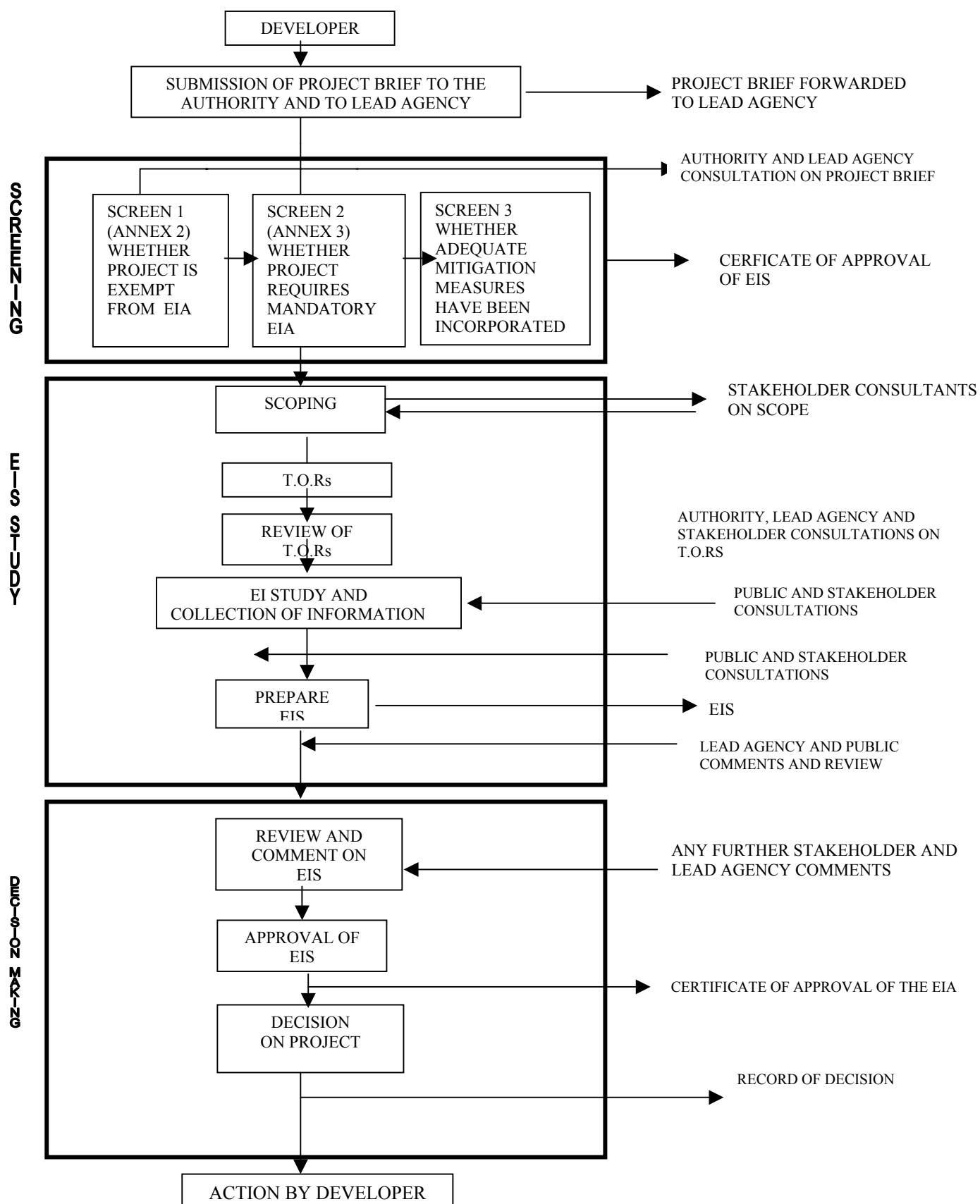
Developers and the private sector in general need to be sensitized to appreciate the value and importance of EIA as a planning tool other than simply doing it as a fulfillment of a legal requirement.

At the central level, there is need to strengthen the capacity of managers of the EIA system, especially reviewers in line ministries, and the District Environment Officers at the district level. This strengthening should also include putting in place ways and mechanisms of implementing and enforcing the laws and regulations on EIA.

Furthermore, there is need to strengthen the capacity of EIA Practitioners to improve on quality of EIAs produced. This could be through development of specialised EIA training courses for such professionals.

With all the challenges identified in this report, it is the firm belief of the Author that EIA can still play a very central role in the efforts to attain sustainable development.

Annex 1: THE UGANDA EIA PROCESS FLOW



Annex 2: List of projects not approved through the EIA decision-making process

Project type	Reason for non approval
1. Proposed school in Bugolobi *	Location was in wetland
2. Proposed car show room in Seeta Kampala	Location was in wetland
3. Proposed use of herbicides for water hyacinth control in Lake Victoria	Due to risk factors and based on Precautionary principle as data available was not very conclusive for informed decision making
4. Proposed shopping complex at Kampala City square	Potential conflict with planning provisions of Kampala City
5. Proposed fish factory in Mwola Forest Reserve	Project was not compatible with Forest management requirements
6. Proposed warehouses in Kinawataka area, Kampala	Location potentially blocked a major drainage corridor for the Nakawa industrial area and flooding problem could be aggravated
7. Petroleum products installations at the shores of Lake Victoria, Bukakata and Kasensero (November 2002)	Project violated the Regulations on lakeshores and Riverbanks and no oil spill contingency plan was provided in case of major oil spill disaster. Risk factors were also taken into consideration.
8. Abattoir by Ssisa Sub-county in Kajansi	Project located in wetland and aeroplane flight path and aviation risks could result from bird hazards associated with abattoirs.
9. Proposed soap factory at Kigunga, Mukono	Factory was to discharge effluent into a stream which was being used as a source of water for a college a short distance downstream.
10. Proposed Golf course within Nakivubo wetland, Kampala	Project was not approved because of the importance of Nakivubo wetland in protecting the downstream lake Victoria from direct pollution loading from Kampala run-off.
11. Proposed Elephant center in Jubilee park Kampala	Project was stopped because it was to encroach on one of the few remaining gazetted green spaces in Kampala city.
12. Proposed car washing bay at Kansanga Kampala	Project stopped because it would introduce detergents into the water systems, which is being abstracted for domestic use by downstream communities.
13. Proposed school at Kansanga wetland Kampala	Location for the project was not suitable for the project due to regulations governing wetlands.
14. Proposed coffee factory within Nakivubo wetland	Project was not approved because of the importance of Nakivubo wetland in protecting the downstream lake Victoria

	from direct pollution loading from Kampala run-off
15. Proposed petrol station in Jinja taxi park	Project rejected because of inadequate space, encroachment into road reserve and due to opposition by local community
16. Proposed spices growing project in Natyonka Forest Reserve, Mukono District.	Project intended to grow spices through clearing of undergrowth in a natural tropical high forest and this was found to be detrimental to future regeneration of the forest as the undergrowth are the ones that eventually grow into the big forest trees and are also the basis of the rich forest biodiversity.
17. Proposal for breeding of tropical aquarium fish based on imported brood stock	The proposal violated fish regulations that prohibit importation of alien fish species.
18. Proposal for a car show room at Banda, Kampala	The location of the proposed site was below the regulated hydropower transmission way-leave for a 132 KV transmission line.
19. Proposal to collect and utilize municipal organic waste for fertilizer production	Project not approved because the developer could not prove that the source of waste would be from a location where waste segregation is practiced as municipal waste is largely unsegregated.
20. Proposed landfill site for Kampala city off Entebbe road	Proposed site was in itself suitable but was very far and would make waste transportation uneconomical to the municipal authorities who are already constrained with heavy financial expenditure for waste transportation. KCC was advised to find alternative site.

- * Project was for a serving Government Minister, who fortunately respected the decision taken based on preliminary EIA.

Annex 3: SCHEDULE OF EIA FEES AS CONTAINED IN SCHEDULE THREE OF THE EIA REGULATIONS

Fees payable for Project briefs and Environmental Impact Assessment under sub-regulation (1) of Regulation 37.

- (i) Where the total value of the project does not exceed shs. 50,000,000/= the amount payable shall be shs. 250,000/=
- (ii). Where the total value of the project is more than shs. 50,000,000/= but does not exceed shs. 100,000,000/= the amount payable shall be shs. 500,000/=
- (iii). Where the total value of the project is more than shs. 100,000,000/= but does not exceed shs. 250,000,000/= the amount payable shall be shs. 750,000/=
- (iv). Where the total value of the project is more than shs. 250,000,000/= but does not exceed shs. 500,000,000/= the amount payable shall be shs. 1,000,000/=.
- (v). Where the total value of the project is more than shs. 500,000,000/= but does not exceed shs. 1,000,000,000/= the amount payable shall be shs. 1,250,000/=
- (vi). Where the total value of the project is more than shs. 1,000,000,000/= but does not exceed shs. 5,000,000,000/= the amount payable shall be shs. 2,000,000/=; and
- (vii). Where the total value of the project is more than shs. 5,000,000,000/=, the amount payable shall be 0.1% of the total value of the project.

Note that the exchange rate of Uganda Shilling to a dollar is now about 1 US \$ to 1,800 Ug. Shillings.

Annex 4:

NEMA approval letter for the Environmental Impact Statement for the water hyacinth control program- Uganda September 1997 (Reproduced)

11 September, 1997

NEMA/8.3

The Permanent Secretary
Ministry of Agriculture, Animal Industry and Fisheries
P.O. BOX 102
Entebbe

RE: **APPROVAL OF THE ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED WATER HYACINTH CONTROL PROGRAMME**

Reference is made to your submission of the Environmental Impact Statement (EIS) for the proposed Water Hyacinth Control Programme in Lake Victoria and other Regional Waterways to the National Environment Management Authority (NEMA).

By virtue of Section 7 (1) and 20 of the National Environment Statute, Statute No.5 of 1995, and after a careful review of the EIS, other documentation on the matter, materials and comments submitted and considering the Report of the Presiding Officer for the Public Hearing conducted for the purpose, the following are NEMA's decision regarding the proposed components for control of the water hyacinth in Uganda.

1. **We approve** the use of an integrated water hyacinth control programme involving physical (manual and mechanical) and biological control options. These should proceed and be implemented as no significant environmental impacts have been identified in the EIS and no significant adverse effects were found which either affect the health of the people or affect the ecological functioning of the lake environs. Further, the biological control option is approved for immediate implementation as a long-term control strategy. However, the following matters should into account when implementing the components involving physical (manual and mechanical) removal:
 - (a) appropriate disposal sites should be identified for the harvested weed, and these should be approved by NEMA. Disposal sites should be appropriately located so as to avoid re-infestation due to seed dispersal and further eutrophication;
 - (b) where feasible, the harvested water hyacinth should be disposed of in such away that it can be economically used.
2. The chemical control option using the proposed candidate herbicides, i.e., use of *2,4-dichlorophenoxyacetic acid* (commonly known as Weeder 64 or 2,4-d Amine) and/or *phosphonomethyl glycine* (commonly known as Rodeo or glyphosate) **is deferred** and is, therefore, **is not approved** on grounds listed below.
 - (a) The **serious inadequacies and uncertainties** in the information provided in the EIS on the candidate herbicides, and technical flaws in the data collection methodology at various stages of the chemical verification trials makes the information produced in the EIS inconclusive for decision-making. Where there are **threats of serious and irreversible damage, the principle of precaution should apply**. These **inadequacies** are clearly presented in the attached Report of the Public Hearing as identified by members of the public.

- (b) the socio-economic analysis as was demanded in the study protocol did not take into account the concerns of the public as was required through the scoping process. No public reactions were included in the EIS as to the viability or safety measures;
- (c) in analyzing the potential impacts of the chemical control option, the EIS does not make any reference and analysis of the risks involved to the Ugandan economy, particularly with respect to the potential attendant risk of losing fish export market at a critical time when fish exports constitute one of the biggest foreign exchange earnings. The attendant risk analysis on fish exports was part of the scoping document of 20th May, 1996, and also part of technical, socio-economic and environmental liabilities associated with the proposed herbicide application in Ugandan water bodies. In this regard, the risk and liabilities to the fish consumers or the export market was not examined at all and neither is the responsible party for any related risks identified;
- (d) there is strong probability of legal suits being brought against either the Government, NEMA, or other person who may be directly, indirectly, vicariously or severally responsible for the application of the candidate herbicides. This probability would be a result of loss of income to those who carry out trade in fish and fish products; those who may be affected as a result of health mishap, or those who may bring legal suits in compliance with Constitutional rights, or those rights and obligations contained under the National Environment Statute, among other laws and customs;
- (e) there was insufficient information or evidence which was provided in compliance with Uganda's international obligations especially relating to shared water resources. The consent of such riparian states was not overly provided to prove that either consent from competent authorities in those countries have been sought or such riparian countries have no objection to Uganda's application of herbicides to control the water hyacinth;
- (f) there were serious contradictions, flaws in methodology, costing and technical information, among others. The following are some of the contradictions or flaws or lack/inadequate information:
 - (i) whereas the EIS alludes to the herbicides as having significant impacts on aquatic system, including water quality and were unlikely to have adverse environmental effects after a single application event, the same EIS, without elaboration, alludes to possible risk by stating that the aquatic herbicides will not be used where they will have adverse effects on the lake water used for domestic, agricultural or industrial use;
 - (ii) although single application of the herbicides was used during the trials, the EIS suggests that for effective control, it is necessary to carry out multiple herbicide application. Hence, further studies would be necessary to rule out probable attendant environmental impacts such as accumulation of herbicide residues via the food chain. This in essence shows a serious lack of scientific information on the effects of repeated spraying both to human health and the aquatic system;
 - (iii) given the fact that the fish was not confined in cages in the test plots of the in-lake trials, and given that the test plots were not adequately protected from interferences, such as interference by water currents and movement of biota including fish in and out of the test plots, it is not possible to draw scientific conclusions to support the results of the tests. There is real difficulty in measuring or assessing the extent of subjects exposure or determining whether the subjects analysed were the same as those that were sprayed;
 - (iv) the water hyacinth infestation in Lake Victoria was estimated at approximately 4000 hectares at the end of 1996 (*page 16 of EIS*). Given that it takes one day to control 100 plus hectares using aircraft spraying, and subtracting those isolated areas where chemical use is supposedly to be restricted, the scientific calculation will show the "first spray" to cover the 4000 hectares will require not less than 20 times of separate sprays to start with and this is before any other subsequent

sprays are done. It should be remembered that the “first spray” does not kill the weed, nor does it kill the seed of the water hyacinth.

Further, the EIS does not state how many times spraying will be done in order to control the hyacinth. It is not clear whether the first application will be followed by similar repeated applications and if so the potential cumulative impacts are not analysed;

- (v) as far as the efficacy of the chemical control option is concerned, the herbicides do not only pose a lot of environmental uncertainties and risks, but are also not effective in controlling the weed.

Attention is drawn to the observations made at the Kajansi pond trials (see pages 11 and 12 of the appended Kajansi trials report in the EIS) which indicated the following:

- (a) that the experimental ponds treated with glyphosate showed 40% re-growth after 14 weeks and up to 60% re-growth after 16 weeks;
- (b) that the experimental ponds treated with 2,4-D Amine showed 40% re-growth after 12 weeks, 70% re-growth after 14 weeks and 80% re-growth after 16 weeks. The latter two treatments in fact already had flowering water hyacinth. In the lakes of Uganda with long and convoluted shorelines, it will be inevitable that this kind of re-growth would have to be repeatedly sprayed with herbicide to sustain control. This factor surrounding the efficacy status of the chemical control option for water hyacinth control can be substantiated at Kajansi ponds where the water hyacinth did not die after the single application, but in fact continues to persist up to today;
- (vi) there was a deliberate under-costing of the chemical control option in that the costs of hiring the plane to spray the hyacinth, the payment for the plane crew, including the pilot and “qualified” herbicide applicators, costs associated with repeated spraying, the cost of loss of fish revenue, purchase of the chemicals, among other attendant costs, were not reflected. Seen against the other options, that is, mechanical and manual, the costing of the chemical option was not based on standardized parameters;
- (vii) whereas the experiments were conducted using hand-held spray pumps, the EIS proposes to use aerial spraying using aircraft. This will involve significant drift of chemicals to non-target areas including agricultural crops; however, risk analysis of the potential drift effect was not done;
- (g) information received, including that from Florida lakes in USA, Sudan and Zimbabwe indicates that intensive herbicide use has to be maintained to sustain the maintenance control of water hyacinth. In such cases, pockets of the extensive weeds are still visible despite chemicals/herbicide use for over 40 years. Comparative information from elsewhere in the world shows that the “apparent success” of using chemicals or herbicide control option in bringing the water hyacinth under control is not correct. The effect of such observations strongly indicates that use of chemicals especially on a large lake rich in biological diversity like Victoria, does not actually “knock-down” the water hyacinth infestation either with single or multiple applications;
- (h) the use of herbicides, especially glyphosate, contributes to enriching the already heavily eutrophied lake through adding more nutrients into the water. This in turn could cause other ecological problems in the lake such as affecting the food chain and increase phytoplankton growth. The risk of further nutrient enrichment through herbicide application was identified at both Kajansi and in the in-lake trials, where in both cases, algal multiplication was associated with glyphosate application;

- (i) the EIS does not have an important component of a monitoring programme which should be standard for any EIS, but only indicates that the monitoring programme will be developed as part of the Operational Plan for Use of Aquatic Herbicides (OPUAH). This omission creates uncertainties and makes decision-making on the safety of the herbicides very difficult;
 - (j) whereas the fear for the effects of possible decomposition of rotting water hyacinth was partly the basis for water quality analysis, the results as prescribes in the EIS are only for a time frame when the rotting/decomposition of water hyacinth had not yet commenced, and the results, therefore, do not answer the environmental concerns associated with potential impacts of decomposing water hyacinth on water quality. The concern remains unanswered;
 - (k) the Report of the public hearing concluded on 30th July, 1997, produced overwhelming objection to the use of the candidate herbicides. Various scientific and socio-economic reasons were given and for further reference, the report is attached for your information.
3. By virtue of the supervisory and monitoring powers entrusted to NEMA under the National Environment Statute and the National Environment Policy, and given the urgency and magnitude of the problem and considering the grounds above, we recommend that the following urgent actions should be taken in the quest to control the water hyacinth from Uganda's water bodies.
- (a) The current water hyacinth control initiatives involving use of biological agents and use of Physical (manual and mechanical) should be stepped up to a scale that can cope with the magnitude of the problem. Mechanical control initiatives should particularly be stepped up at key locations of economic significance such as major transportation terminals, power generation sites and water intake points.
 - (b) Since biological control has been observed to stunt the growth of the weed (*as indicated at page 13 of EIS*) and is thus able to achieve the same objective of lowering weed proliferation without any adverse attendant environmental impacts, more resources should be channelled to biological control for this objective other than herbicide use.
 - (c) It is a fact that since the problem of the water hyacinth was identified in Uganda's water bodies, a lot of effort has gone into devising more positive ways to not only control the weed but also to convert it to more valuable use if harvested. It is in this spirit that the possible utilisation of the harvested weed for eg; biogas production, paper production, crafts, animal feeds or soil conditioner, among others, should be strongly considered while determining locations for the water hyacinth disposal once removed.
 - (d) Immediately install a boom on the River Kagera to control the influx of the weed from entering the lake. Where possible, more booms should be installed along the river before it enters the lake. Such booms should be supported by mechanical removal operations.
 - (e) Urgent action should be taken to control pollution sources that make the lake waters a more fertile ground for water hyacinth proliferation. Failing to do this would mean that the nation is treating the symptoms while leaving the cause unchecked.
 - (f) Steps should be taken to consult and cooperate with the other riparian states in the quest to control the water hyacinth either from those countries or through other means as the lake is an international shared resource.

Based on the existing information as contained in the Environmental Impact Statement, and given that the EIS itself recommended further evaluation of the impact of chemicals and other outstanding areas of scientific and public concern, and given further that a lot of short-comings in the study methodology were identified by the scientist themselves and during the public hearing, **NEMA does not approve the application of the candidate herbicides for water hyacinth control.**

Please Note that should you feel that the above mentioned candidate herbicides need to be used, more scientific information regarding the long-term effects needs to be sought, a proper methodology used and the

above main grounds be addressed and complied with to the satisfaction of NEMA. In that case, a new EIS is required.

We take this opportunity to thank your Ministry and all those who have been involved for the commendable efforts which were put into the EIS and look forward to your continued cooperation.

Prof. John Y Okedi

EXECUTIVE DIRECTOR

NEMA

- c.c The Right Hon. Prime Minister,
 Chairman,
 Policy Committee on the Environment
- c.c: The Hon. Minister of Natural Resources
- c.c: The Hon. Minister of State for Natural Resources
- c.c: The Chairman,
 Parliament Sessional Committee
 Agriculture, Animal Industry and Fisheries
- c.c: The Chairman,
 Parliamentary Sessional Committee on Natural Resources
- c.c: The Principal Private Secretary,
 To H.E the President,
 State House, Nakasero
- c.c: The Principal Private Secretary,
 To H.E the Vice President,
 Katonga Road, Kampala
- c.c: The Chairman,
 Board of Directors, NEMA

Annex 5: Projects to be considered for Environment Impact Assessment.

The following projects are listed in The National Environment Statute, 1995, schedule 3, as those for which an EIA shall be conducted:

1. General -
 - (a) an activity out of character with its surrounding;
 - (b) any structure of a scale not in keeping with its surrounding;
 - (c) major changes in land use.
2. Urban development including -
 - (a) designation of new townships;
 - (b) establishment of industrial estates;
 - (c) establishment or expansion of recreational townships in mountain areas, national parks and game reserves;
 - (e) shopping centres and complexes
3. Transportation including -
 - (a) all major roads;
 - (b) all roads in scenic, wooded or mountainous areas;
 - (c) railway lines;
 - (d) airports and airfields;
 - (e) pipelines;
 - (f) water transport.
4. Dams, rivers and water resources including -
 - (a) storage dams, barrages and weirs;
 - (b) river diversions and water transfer between catchments;
 - (c) flood-control schemes;
 - (d) drilling for the purpose of utilizing ground water resources including geothermal
5. Aerial Spraying
6. Mining, including quarrying and opencast extraction of -
 - (a) precious metals;
 - (b) diamond;
 - (c) metalliferous ores;
 - (d) coal;
 - (e) phosphates;
 - (f) limestone and dolomite;
 - (g) stone and slate;
 - (h) aggregates, sand and gravel;
 - (i) clay;
 - (j) exploration for the production of petroleum in any form.
7. Forestry related activities including -
 - (a) timber harvesting;
 - (b) clearance of forest areas;
 - (c) reforestation and afforestation.
8. Agriculture including -
 - (a) large-scale agriculture;
 - (b) use of new pesticides;
 - (c) introduction of new crops and animals;
 - (d) use of fertilizers.

9. Processing and manufacturing industries including -
 - (a) mineral processing, reduction of ores and minerals;
 - (b) smelting and refining of ores and minerals;
 - (c) foundries;
 - (d) brick and earthenware manufacture;
 - (e) cement works and lime processing;
 - (f) glass works;
 - (g) fertilizer manufacture and processing;
 - (h) explosives plants;
 - (i) oil refineries and petro-chemical works;
 - (j) tanning and dressing of hides and skins;
 - (k) abattoirs and meat-processing plants;
 - (l) chemical works and process plants;
 - (m) brewing and malting;
 - (n) bulk grain processing plants;
 - (o) fish processing plants;
 - (p) pulp and paper mills;
 - (q) food processing plants;
 - (r) plants for the manufacture or assembly of motor vehicles;
 - (s) plants for the construction or repair of aircraft or railway equipment;
 - (t) plants for the manufacture or processing of rubber;
 - (u) plants for the manufacture of tanks, reservoirs and sheet-metal containers;
 - (v) plants for the manufacture of coal briquets.
10. Electrical infrastructure including -
 - (a) electricity generation stations;
 - (b) electrical transmission lines;
 - (c) electrical substations;
 - (d) pumped storage schemes.
11. Management of hydrocarbons including -
the storage of natural gas and combustible or explosive fuels.
12. Waste disposal including -
 - (a) sites for solid waste disposal;
 - (b) sites for hazardous waste disposal;
 - (c) sewage disposal works;
 - (d) major atmospheric emissions;
 - (e) offensive odours.
13. Natural conservation areas including -
 - (a) creation of national parks, game reserves, and buffer zones;
 - (b) establishment of wilderness areas;
 - (c) formulation or modification of forest management policies;
 - (d) formulation or modification of water catchment management policies;
 - (e) policies for management of ecosystems, especially by use of fire;
 - (f) commercial exploitation of natural fauna and flora;
 - (g) introduction of alien species of fauna and flora into ecosystems.

REFERENCES

The Republic of Uganda, 1994:	The National Environment Management Policy for Uganda
The Republic of Uganda, 1994	The National Environment Action Plan for Uganda
The Republic of Uganda, 1995	National Policy for the Conservation and Management of Wetland Resources.
NEMA and IUCN, 1996	Proposals for Institutional strengthening and human resources development in Environmental Impact Assessment
The Republic of Uganda, 1997:	Guidelines for Environmental Impact Assessment in Uganda.
The Republic of Uganda, 1998:	The Environmental Impact Assessment Regulations.
The Republic of Uganda, 2003:	The National Environment (Conduct and Certification of Environmental Practitioners) Regulations.
The Republic of Uganda 1995:	The National Environment Act Cap 153.
The Republic of Uganda, 2004:	Background to the Budget for the Financial Year 2004/05
The Republic of Uganda, 2003:	The Petroleum Supply Act.
The Republic of Uganda, 2002/03	The Uganda National Household Survey 2002/03
The National Environment Management Authority, 2003:	Guidelines for Public hearings in Uganda
The National Environment Management Authority, 2003:	Annual Report