

Commission of the European Communities



Uganda

**Country Environment Profile
(Draft Report)**

Framework Contract AMS/451

Lot no 6

Harress Pickel Consult AG

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ATKINS

International

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ACRONYMS AND DEFINITIONS

ACODE	Advocates Coalition for Development and Environment
AIDS	Acquired Immune Deficiency Syndrome
CARE	Carry American Relief Everywhere
CBO	Community Based Organisation
CFR	Central Forest Reserve
CITES	Convention on International Trade in Endangered Species
CSP	Country Strategy Paper
DEAP	District Environment Action Plan
DEC	District Environmental Committee
DEO	District Environmental Officer
DWD	Directorate of Water Development
EC	European Commission
EIA	Environmental Impact Assessment
ENR	Environment and Natural Resources
EU	European Union
FID	Forestry Inspection Division
FRMCP	Forest Resource Management Conservation Project
GOU	Government of Uganda
HEP	Hydroelectric Power
IDP	Internally Displaced Persons
KCC	Kampala City Council
LVEMP	Lake Victoria Environment Management Project
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MEMD	Ministry of Energy and Minerals Development
MNR	Ministry of Natural Resources
MW	Megawatts
MWLE	Ministry of Water, Lands and Environment
NAADS	National Agricultural Advisory Delivery Services
NARO	National Agricultural Research Organisation
NEAP	National Environment Action Plan
NEMA	National Environment Management Authority
NES	National Environment Strategy
NFA	National Forest Authority
NGO	Non-Governmental Organisation
NSSD	National Strategy for Sustainable Development
NWCMP	National Wetlands Conservation and Management Programme
NWSC	National Water and Sewerage Corporation
PAF	Poverty Action Fund
PEAP	Poverty Eradication Action Plan
PMA	Programme for the Modernisation of Agriculture

SEA	Strategic Environmental Assessment
SWAp	Sector-Wide Approach
TECCONILE	Technical Cooperation Committee for the Promotion of the Development and Environment Protection of the Nile Basin
THF	Tropical High Forest
UJAS	Uganda Joint Assistance Strategy
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commission for Refugees
UNIDO	United Nations Industrial Development Organisation
USAID	United States Agency for International Development
USD	United States Dollars
UWA	Uganda Wildlife Authority
UWS	Uganda Wildlife Society
WID	Wetlands Inspection Division

1. EXECUTIVE SUMMARY

STATE OF THE ENVIRONMENT

Physical Environment

- 1.1 Land degradation is one of the main environmental issues facing Uganda. Over 80 percent of the country's population lives in rural areas and population is doubling every 20 years at the current rate of growth.
- 1.2 The key land degradation issues are soil erosion, decreasing soil fertility, agrochemical pollution and a tendency towards desertification. The main causes are population pressure, inappropriate land management practices and on rangelands over-stocking.
- 1.3 The main water environment concerns are the issues of quality and access. The main threats to quality include eutrophication, pollution, and the proliferation of invasive plants.
- 1.4 Tropical high forest has declined from a total of 13 percent of the total area (35,000 km²) in 1900 to about 7,000 km² in 2005. The Central Forest Reserve (CFR) currently covers some 12,000 km² and includes about half of the tropical high forest. Overall 70 percent of the nation's forests are not protected; they act as the nation's main fuel source and are becoming increasingly degraded.
- 1.5 Encroachment, involving the conversion of gazetted forest land to agriculture, has become a major problem throughout the nation and per capita forest has declined from 0.3 ha in 1990 to 0.1 ha in 2004. A fuelwood crisis is looming as demand exceeds supply with rising population. The average distance travelled to collect firewood has risen from 0.06 km in 1992 to 0.73 km in 2000.
- 1.6 Uganda's wetlands support a rich diversity of plants and animals and serve an important natural role for sediment, nutrient and toxin retention, stabilisation of the hydrological cycle, harbouring biodiversity, biomass production and water supply in rural areas. They are under threat in many ways including from encroachment, brick production, drainage and pollution.
- 1.7 As a consequence of civil strife Uganda has about 555,000 IDPs located in six districts. In addition there are a further 190,000 refugees from wars in neighbouring countries are being accommodated in camps.

Biological Environment

- 1.8 Uganda's biodiversity is one of the highest on the continent and is estimated by NEMA to be worth about USD 1,000 million per annum. The main causes of biodiversity loss are habitat decline, over harvesting and introduction of alien species. Many of the sectors targeted for future economic growth depend directly on the country's biological resources.
- 1.9 Most of Uganda's most important biological assets are now protected in designated areas. Thus rare vegetation, a variety of large mammals and tropical forests provide a source of pride for the inhabitants and also a source of revenue through tourism.

- 1.10 Fisheries are under threat from land degradation causing excessive silt loads in lakes and rivers. There are questions of sustainable catch and threats from drought and pollution and floating weed.

Socio-economic Environment

- 1.11 Access to healthcare facilities is limited to about half the population but healthcare infrastructure is dilapidated and in need of modernisation. Life expectancy is 52 and malnutrition, malaria and HIV/AIDS are the most serious diseases. Malaria remains the principal public health problem but HIV/AIDS is also an extremely serious threat. Thanks to a massive publicity campaigns the overall prevalence has dropped from 30 percent in 1992 to 6.5 percent in 2001 but the situation remains precarious. The pandemic has been disruptive leaving many families without their main wage earners.
- 1.12 Although addressed by the Land Act 1998 land ownership remains confused in many areas and plots fragmented and small. There is no easy solution to this problem which is likely to have a major impact for years to come but the absence of an overall land use policy is a significant omission.
- 1.13 Water and sanitation are major problems in all urban centres with the majority of the population in most towns unable to gain access to clean water. Slums and squatter communities are also a problem in bigger towns and in Kampala in particular.
- 1.14 Uganda's main energy source is from biomass accounting for about 93 percent of demand (including about 5 percent charcoal) while petroleum products account for six percent and electricity one percent of demand respectively. Just under half the biomass production is obtained from protected areas.

Environmental Indicators

- 1.15 NEMA is developing natural resource indicators for Uganda and recognises five basic types. Given the considerable thought that has already gone into the process of identifying indicators for Uganda by NEMA and the diligent participatory planning that has helped to build consensus on these, the NEMA work-in-progress is an appropriate basis for future comparisons.

ENVIRONMENTAL POLICY, LEGISLATIVE AND INSTITUTIONAL FRAMEWORK

Policy

- 1.16 The National Environment Management Policy gave rise to the National Environment Statute (NES) 1995, which brought together all the sectoral agencies involved in the management of the environment. Although the NES has assured a bottom-up approach from the lowest level in the environmental, decision-making process and implementation, some challenges still remain; the need to build capacity of the judiciary, the need to balance between conservation and development - often weighted to the latter, the lack of sectoral support and the need to develop and adopt guidelines for public access to public domain environmental documents

- 1.17 Uganda has many plans and strategies in place including; Vision 2025, Poverty Eradication Action Plan, Medium Term Expenditure Framework, District and Sub-County Development Plans, Plan for Modernisation of Agriculture etc. The second PEAP is effective in terms of transparency and accountability, communication and public awareness and in assigning implementation responsibility. The main areas for improvement include: social and poverty issues, international commitments, high-level government commitment, co-ordination with donors and budgetary provision.
- 1.18 Land use, tenure and access though managed via the Constitution and the Land Act 1998, suffer from nominal protection. In practice, absent land ownership, land grabbing, de-gazetting, illegal building *etc* all contribute to a confused ownership. Several potentially good environmental initiatives are thwarted and compromised by the land tenure issue.
- 1.19 Although there are a number of policy initiatives to deal with water resources, forests, wetlands, wildlife and so on, several challenges remain including: population pressure and poverty levels which trigger land use conflicts, poaching and encroachment. Burgeoning population growth and associated poverty will only compound policy weakness.

Legislation

- 1.20 A good environmental legislative framework is in place although there are aspects that lead to implementation weakness including; institutional rivalry, inadequate policy implementation, lack of clear guidelines and budgets for inter-sectoral activities, poor monitoring system in biodiversity conservation, political interference, weak enforcement and law enforcement capacity, and lack of balancing economic needs against biodiversity conservation.
- 1.21 Whilst there is a body of law with a robust basis for environment protection, much of the implementation relies on under-resourced and poorly funded institutions such as the FID, and WID at central government level, and the district offices, locally. Consequently, whilst the legislative basis is available, the enforcement basis is not.
- 1.22 Uganda has entered into several international and regional environmental conventions and, as a result, has played an active part in regional environmental management.
- 1.23 Of the existing legislation, land tenure and access has nominal provision but this has to be reconciled with existing concerns of; small and non-viable holdings, rights to gazetted areas and natural resources, declining land productivity, women's land rights, urban land and lack of land use planning. The management of natural resources is provided for under several legislative instruments but the resources are under considerable pressure and require full rigour of enforcement to achieve the aspirations of the protecting laws.
- 1.24 Central government continues to devolve power to local government and has provided some resources for the preparation of parish, sub-county and district environment action plans, which eventually should be incorporated into their respective development plans. Fisheries decentralisation has provided good opportunities for community participation but still suffers from capacity issues. In general decentralisation has had a negative effect on biodiversity.

Institutions

- 1.25 Institutional weaknesses for environmental protection were identified during the NEAP process. Subsequently, the National Environment Management Policy advocated a new institutional structure, the National Environment Management Authority (NEMA) which was provided for in the NES. NEMA is located under MWLE and is the principal agency for the management of the environment with the express mandate to coordinate, monitor and supervise all activities in the field of the environment. It is horizontally linked to the lead agencies in the environment sector, and vertically to the local government structure, the private sector, and civil society. NEMA is not sustainably funded.
- 1.26 NEMA is in the process of developing natural resource indicators. Macro-economic indicators which measure development policy/strategy impact have been developed for; wetlands, forests, water, fisheries, wildlife and land, tend to reflect PEAP criteria.
- 1.27 The Local Government Act 1997 provides for the devolution of governance from the centre to the districts and lower levels. The District Council is the highest level of governance at sub-national level. One of its roles is to ensure the integration of environmental issues in the development planning process. Environment committees are also established at sub-county, parish and village levels, although the lowest level of government is the sub-county.
- 1.28 The district environment committees are expected to ensure that environmental concerns are integrated into district plans and projects, formulate bye-laws, promote dissemination of environmental information and prepare the district state of environment reports annually. Most districts have formed environment committees and prepared their first and subsequent state of environment reports with the technical assistance of NEMA. However, the capacity of the environment committees at various levels of local government is still weak.
- 1.29 There are a number of active NGOs including ACODE, CARE, Clean Up Uganda, Environmental Alert, Greenwatch, and the Ugandan Wildlife Society.

EC AND OTHER ENVIRONMENTAL DONOR CO-OPERATION

EC Co-operation from an Environmental Perspective

- 1.30 Several EC-funded interventions in environment have been undertaken during the last five years. Currently there are no programmes planned, though an extension to the Sawlog Production Grant Scheme under the FRMCP is under consideration (within the 10th EDF).
- 1.31 Relatively little information is readily accessible about the EC interventions other than those captured under the FRMCP. The FRMCP Mid-Term Review (July 2004) identified issues that have applicability for other EC projects – participatory approaches and ensuring relevant skill development. General experience indicates that interventions have to overcome institutional rivalry and inconsistent policy implementation in lead agencies.
- 1.32 The primary effects of EC interventions occur in the Districts where monitoring capability is weak. As a result, the environmental impacts of EC cooperation, other than those directly envisaged as part of the intervention, are rarely recorded within the institutional memory.

- 1.33 Over the last four years, donor aid, generally, to GoU has been shared approximately equally between budget support and project aid. GoU prefers budget support over project aid, and general budget support over sector budget support. Sector expenditure ceilings are determined centrally on the basis of the government's strategic spending priorities, not by how much sector support donors are promising to favoured certain sectors. The implications for future EC interventions in the field of environment are that a much closer co-operation and alignment between donors will be necessary to optimise interventions. There is an opportunity therefore to strengthen tiers of government that are not typical recipients of aid whilst addressing the pervasive challenge of weak governance at lower tiers.
- 1.34 For the Country Strategy Paper, development harmonisation with other donors via the Uganda Joint Assistance Strategy (UJAS) is a possibility, though it is not yet clear how the UJAS could replace the 10th EDF CSP. The UJAS and increased donor harmonisation is in line with PEAP principles; the PEAP remains the guiding policy document.

Co-operation Funded by Other Agencies from an Environmental Perspective

- 1.35 A number programmes and projects with an environmental focus or anticipated impact have been funded by donors other than the EC (including EU member states). Co-ordination between donors and the EC is primary via the ENR Donor Group. In principle this should offer an effective mechanism for donors to align their interventions. In practice, some donors may prefer to use the group to remain updated on ENR donor activity generally, rather than as a proactive tool with which to guide or harmonise specific donor interventions.
- 1.36 With few exceptions, donors have increased the share of programme aid notably SWAPs, other basket funding and budget support. These modalities have facilitated harmonisation and have a strong potential to reduce donor transaction costs in the long run.
- 1.37 Budget support and basket programme support strengthen the government ownership and changes its quality. Budget support and SWAPs are long-term commitments and have the potential to avoid the traditional go-stop-go situations. This is emphasised in the PEAP by stating that a shift from the magnitude of aid to changes in the composition of aid; its predictability and in the manner in which donor aid programmes are articulated with the government budget, is crucial.
- 1.38 In line with the PEAP priorities GoU envisages an increase in the sector shares of the budget for agriculture, roads and works, education and health. Strengthening budgeting at the sector level will be crucial to achieving the PEAP objectives. SWAPs, which have already generated important benefits for budget planning, will be extended to cover all areas of the budget. All budget submissions by line ministries and other spending agencies must be consistent with the relevant sector expenditure plan. All projects will have to satisfy a range of criteria, including affordability within the relevant sector ceiling.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- 1.39 Natural resources in Uganda are under considerable pressure, and require the full rigour of policy application and regulatory enforcement to achieve the aspirations of the protecting laws. The principal driver threatening the natural resource base is population growth with the associated issue of widespread poverty.
- 1.40 The key pressures on the natural resources are deforestation and encroachment, land degradation, land tenure and fragmented holdings, wetlands degradation, threats to fisheries, climate variability, water, sanitation and solid waste management in urban centres, loss of biodiversity and introduction of alien species.
- 1.41 The natural resource policies are capable of protecting the relevant assets and District environmental management policies are also appropriately focussed. However a hurdle to the successful implementation of policies is the process of decentralisation which has had a negative effect on the natural resource base. The institutional strength at District level is weak and largely incapable of delivering its mandate of environmental protection and management.

Recommendations

- 1.42 The primary aid delivery approach should be via budget support and SWAps rather than by any non-SWAps, project-based intervention. The lack of capacity at the District level threatens environmental improvement. Modalities of budget support and SWAps are ideally suited to engaging capacity weakness at this level of local government.
- 1.43 The ENR donor group needs monthly updates of activities and to be more proactive. Harmonisation with other donors via the Uganda Joint Assistance Strategy is a possibility.
- 1.44 A strong District environmental capability is necessary to safeguard sectoral interventions and direct technical interventions at local level and support would be effective in this area.
- 1.45 No further additional studies are needed but SEA should be adopted and NEMA needs to complete its work on environmental indicators.
- 1.46 Forestry is an appropriate focus for sector investment both to the NFA and for community-based forestry.
- 1.47 Appropriate support would be additional human resources for MWLE together with GIS, computer, means of transport for each District office. A central repository of environmental information is required.
- 1.48 The two main constraints were the lack of a central data resource and the lack of institutional memory across the board.

2. STATE OF THE ENVIRONMENT

PHYSICAL ENVIRONMENT

Climate, Climate Change and Climate Variability

- 2.1 Uganda has a tropical climate modified by altitude. Rainfall is greater in the mountains and the Lake Victoria region and overall averages between 800-2000 mm per annum. Dry seasons vary across the country making for different planting seasons in the north and the south. Temperatures vary little throughout the year ranging between about 17°C and 27°C.
- 2.2 For a country so dependent on its natural resource base any changes in climate could have a serious effect on the economy and general well-being. Although Uganda is a net sink for greenhouse gases, the country has responded to the global challenge by contributing to carbon sequestration through the promotion of the Actively Implemented Jointly Initiatives. An example is the rehabilitation of degraded areas on Mount Elgon and Kibale. Uganda is a signatory to the United Nations Framework Convention on Climate Change and the Kyoto Protocol. Climate change poses a major challenge for the rural poor in particular and, unless early action is taken to adapt, it may be difficult to achieve some of the Millennium Development Goals.
- 2.3 Climate variation in Uganda is determined significantly by changes in currents in the Indian Ocean and by the *El Nino* Southern Oscillation phenomenon which is associated with predictable drought and high rainfall years. Rainfall variability has a high impact on crop production and the incidence of drought in the last 20 years has been significantly higher than in the preceding 20 years particularly in the north-east. Monitoring of rainfall variability is hampered by poor funding to the Ministry of Water, Lands and Environment's (MWLE) Meteorology Department that is only able to maintain 300 out of a former national network of 1000 rainfall recording stations.

Land

- 2.4 Principal land use classes in Uganda are forests (natural and plantation), scrubland, savannah and grassland, cropland, crop/natural vegetation mosaic, urban and built-up areas, sparse or barren vegetation, wetlands and water bodies. There are 18 soil types divided into seven groups based on their occurrence and agricultural productivity.
- 2.5 Land degradation is one of the principal environmental issues facing Uganda. Over 80 percent of the country's population lives in rural areas and the scale and intensity of land degradation varies from one part of the country to another.
- 2.6 The key land degradation issues are soil erosion, decreasing soil fertility, agrochemical pollution and a tendency towards desertification. Degradation is worst in the densely populated highland areas, the Lake Victoria crescent and fragile semi-arid parts of the country. The main causes are population pressure and inappropriate land management practices.

- 2.7 Current population growth rate is 3.4 percent. If population continues to expand at this rate until 2032 the population will be 67 million and land per capita will have fallen from the current 0.67 persons per ha to 0.26. The result will be greatly increased pressure leading to either intensification of farming or in some areas abandonment of land. Traditional methods for maintaining fertility such as slash and burn will no longer be possible. The poor would be the most affected since they would have limited capacity to purchase farm inputs and lack alternative cropping mechanisms. A principal objective of the Plan for the Modernisation of Agriculture (PMA) is the improvement of productivity, particularly through training, to address this issue.
- 2.8 On the rangelands over-stocking is the key issue. Uganda's rangelands occupy about 84,000 km² situated in the "cattle corridor" that stretches across the country from south-west to north-east. Extensive degradation occurs along livestock routes, watering points and hilltops. These areas are characterised by pasture scarcity which is part of the reason for incursion into neighbouring districts by the Karimojong. The Karimoja region itself is gradually changing from semi-arid vegetation to that of a desert. The cattle culture of the Karimojong and extensive cattle rustling are also part of the problem.
- 2.9 Bush burning is practised on the rangelands mainly for disease control and as a customary activity. While burning can be an effective management tool if applied at the correct time, burning is often late and this gives rise to fire-resistant and often unpalatable forage species.
- 2.10 Soil erosion has been estimated to account for 80 percent of the cost of land degradation in Uganda. While natural disasters such as earthquakes and high rainfall during *El Nino* events can cause short-term intensive soil loss it is the long-term problem of poor management practices that accounts for the greatest losses.
- 2.11 The PMA is aiming to address the soil erosion issue mainly through improvement of the extension service, National Agricultural Advisory Delivery Services (NAADS) and by a range of other support services to encourage sustainable land management and appropriate cropping.

Water

- 2.12 With its relatively high (although variable) rainfall, its lakes, and the River Nile Uganda is generally well endowed with water resources. Open water bodies constitute 15 percent of the country's area. There are an estimated 9,000 springs of which 2,300 are protected which provide important sources of water in rural areas.
- 2.13 In contrast to its surface water resources Uganda's geology of pre-Cambrian granites and gneisses gives rise to relatively poor groundwater reserves. Groundwater resources are generally shallow (8-15 m deep) with well yields in the range 0.4-2.0m³ per hour.
- 2.14 Rapidly increasing population and development in the vicinity of the River Nile may give rise to concerns in the future about the level of downstream flows at the Uganda/Sudan border.
- 2.15 Although generally plentiful, water resources are not evenly distributed and while most of the main population centres are well served some areas have limited access to plentiful water resources.

- 2.16 The main water environment concerns are the issues of quality and access. The main threats to quality include eutrophication, pollution, and the proliferation of invasive plants such as water hyacinth (*Eichhornia crassipes*).
- 2.17 Currently 40 percent of the population of small towns are served with clean water. The ultimate goal is to raise the service level of rural water supply to 100 percent by 2015.
- 2.18 Livestock water demand is high and 2010 forecasts show it to be at a similar level to rural domestic demand at between 225,00-250,000 m³ per annum. Demand is particularly high in semi-arid areas and has traditionally been met by construction of dams. Dams have a relatively short life and also have a number of negative environmental impacts which are not shared by the construction of windmills and boreholes.
- 2.19 Uganda has had a low irrigation utilisation in the past (demand about 200,000 m³/annum). Irrigation is seen as an important part of the PMA and demand is forecast to rise tenfold under the plan to become the nation's principal water consumer. While existing resources are broadly adequate to meet this demand, care will be required to avoid over-exploitation in sensitive areas.
- 2.20 While no major water resource issues are expected to emerge in the foreseeable future the issue of water quality and access will become increasingly acute as urban populations expand.

Forests and Woodlands

- 2.21 Approximately 20 percent (50,000 km²) of Uganda is currently estimated to be under forest. This compares with to an estimate of 45 percent in 1890. FAO estimates that Uganda is losing about one percent of its forest area each year.
- 2.22 Tropical High Forest has declined from a total of 13 percent of the total area (35,000 km²) in 1900 to about 7,000 km² in 2005. The Central Forest Reserve (CFR) currently covers some 12,000 km² in 506 reserves taking and includes about half (3,500 km²) of the tropical high forest. The balance of tropical high forest lies in the private sector and is under extreme threat. Overall 70 percent of the nation's forests are not protected; they act as the nation's main fuel source and are becoming increasingly degraded.
- 2.23 Estimates by MWLE suggest that a fuelwood crisis is looming as demand exceeds supply with rising population. The average distance travelled to collect firewood has risen from 0.06 km in 1992 to 0.73 km in 2000. As Ugandans have become increasingly affluent the demand for charcoal has risen fourfold between 1970 and 2000 and amounts to over 600,000 tonnes/annum; charcoal production is an increasing cause of land clearance.
- 2.24 Encroachment, involving the conversion of gazetted forest land to agriculture, has become a major problem throughout the nation and per capita forest has declined from 0.3 ha in 1990 to 0.1 ha in 2004. A recent study has shown that encroachment has been particularly high in the northern part of the country, as a result of the insurgency, where Internally Displaced Persons (IDP) camps have tended to be located near to gazetted forests. However the concentration of population has reduced pressures on unprotected forests especially in the north-west where woody cover has increased by around 20 percent since the 1980s.

- 2.25 The National Forest Authority (NFA) was established in 2004 following sector reform and the passing of the Forest and Tree Planting Act 2003. The NFA is encouraging private participation in forestry while protecting the CFR which contain the country's most ecologically important forests. The activities of NFA in increasing timber production can be expected to reduce pressure on privately owned forests that receive little or no management.
- 2.26 The EC support to the forestry sector under the Forest Resources Management and Conservation Programme (FRMCP) has been vital for the maintenance of the CFR. The project, which ends in 2006, is providing core funding to the NFA. The NFA is attempting to be self-funding mainly through sale of forest products and also by the development of a seed supply service but some external funding is still likely to be required when the current donor support finally ceases in 2011.
- 2.27 The Sawlog Production Grant Scheme has also received funding under the FRMCP and is directed at private sector development of plantations through the provision of establishment grants. Its principal aim is to bridge the looming timber availability crisis, following some 30 years when virtually no planting took place, and thus reduce the pressure on the CFR. About 2,000 ha have been taken up mid-2005. The minimum land area acceptable is 25 ha so that it is a scheme that generally benefits the better off although there are some examples of collective applications.
- 2.28 Pilot collaborative forest management has also been provided with limited support under the FRMCP. However government staff involved in the project lack motivation and limited progress has been made.

Wetlands

- 2.29 Wetlands cover approximately 13 percent of the total area of Uganda, only slightly less than the area covered by lakes. About one quarter of the wetland area is classed as permanent and the balance as seasonal. They comprise swamp (8,800 km²), swamp forest (365 km²) and sites with impeded drainage (20,000 km²). It is the latter that are the main cause for environmental concern.
- 2.30 Uganda's wetlands support a rich diversity of plants and animals. They also have intrinsic attributes, perform functions and services and produce goods of local regional and national importance. In particular they serve an important natural role for sediment, nutrient and toxin retention, stabilisation of the hydrological cycle, harbouring biodiversity, biomass production and water supply in rural areas.
- 2.31 The scale of wetland degradation varies considerably across the country but Jinja District has only about 10 percent of its wetland relatively intact. The main reasons for loss have been conversion to agriculture, excavation for sand and clay, dumping of solid waste, deforestation and fires. Wetlands are a major source for brick production which not only causes stagnant pools but leads to deforestation along swamp edges for kiln firing. In urban areas industrial pollution of wetlands is an important issue together with nutrient enrichment. Overall the most outstanding wetland issue is the continuing level of degradation. This is encouraged by unclear ownership and in urban areas. Until recently, wetlands were regarded as unhealthy swamps in need of drainage.

- 2.32 A particularly serious issue, with international dimensions, is the degradation of wetlands in the Lake Victoria basin. The filtration role of wetlands plays an important part in the hydrology of the Lake and wetland loss, accelerated by a falls in lake water levels, is leading to increased siltation, eutrophication and pollution.
- 2.33 Wetland protection in Uganda dates from 1986 when the drainage of large wetlands was banned and in 1989 a National Wetlands Conservation Programme was established. Uganda became a signatory of the Ramsar convention in 1987 and Lake George was declared the first Ramsar site, covering 20,500 ha, in 1988. Since then a range of laws have addressed issues partially or fully connected with wetland management including the Wetlands Policy (1995) and Guidelines for Wetlands Resource Developers (1995) and the National Environment Regulations (2000). A Wetland Strategic Plan 2001-2010 has been produced. However there is no legislation specifically dealing with wetlands and the Wetlands Inspection Division (WID) within MWLE has no legal standing. Civil Society is active in highlighting this issue.
- 2.34 Unlike forestry and fisheries wetlands are a relatively new area of environmental concern and extra efforts have been made at capacity building. WID is implementing the National Wetlands Conservation Management Programme (NWCMP) through Poverty Action Fund (PAF) and other funding which is aimed at policy development and the development of capacity to implement it. In the medium term greater autonomy for WID is likely. The revised Poverty Eradication Action Plan (PEAP) clearly sets out the role of natural resource management and states that natural resource management should not stop the use or conversion altogether but accelerate the locations and manner of natural ecosystem conversion under control.
- 2.35 The 9th Meeting of the Conference of the Contracting Parties to the Ramsar Convention on Wetlands is due to be held in Kampala during November 2005 and will give the wetlands sector considerable publicity.

Mineral Resources

- 2.36 The main mineral resource in Uganda is limestone but extraction of this mineral is in decline. Other mineral resources currently exploited include; pozzolana, gold, columbite, kaolin and wolfram with a total value of about USD 6 million. A Mineral Policy was approved by cabinet in 2001.

Geological Risks

- 2.37 Uganda lies on a basement complex of pre-Cambrian rocks which are for the most part stable. However earthquakes do occur from time to time the last significant one being in 1994 when severe mass wasting occurred in Kasese and Kabarole districts.
- 2.38 While geothermal power potential exists on the western side of the country there are no known volcanic risks in Uganda.

Natural Disasters

- 2.39 The main disaster risks are from flooding and drought. Recent flood events have been associated with *El Nino* and have mainly affected the south-west of the country. Droughts occur more frequently and in some areas have been as frequent as once in five years or less. Drought is particular common in the north-east Karamoja region where this factor combined with population pressure and poor land management is converting a semi-desert to desert.

Security Issues

- 2.40 As a consequence of civil strife and armed conflict, Uganda has significant numbers of both refugees and internally displaced persons. In 2002 Uganda had about 555,000 IDPs located in six districts. Over 50 percent of the IDPs were 15 years old or younger. In addition there are a further 190,000 refugees from wars in neighbouring countries.
- 2.41 The USAID funded report *The Impact of Conflict in Northern Uganda on the Environment and Natural Resource Management* (2005) provides a very good account of the environmental impact of the northern Uganda conflict. It demonstrates that while there is severe degradation around IDP camps which tend to be located near to protected areas, some areas, notably the north-west, have shown a vegetation recovery of up to 20 percent woody cover as a result of a substantially reduced resident population over the last 20 years. However the benefits to these areas are at risk as peace develops and the population returns.

BIOLOGICAL ENVIRONMENT

Biodiversity and Ecosystems

- 2.42 Uganda's biodiversity is one of the highest on the continent. It harbours more than half of all African bird species, is second only to the Democratic Republic of the Congo in terms of numbers of mammal species and is ninth richest in the world. Vegetation analysis shows that there are about seven major centres of plant endemism in Tropical Africa of which four occur within Uganda's borders. Uganda has seven biodiversity hotspots all of which are under protected area status of one form or another. On private land biodiversity is far less concentrated.
- 2.43 Of global significance Uganda is home to more than half of the world's population of mountain gorillas (*Gorilla gorilla berengei*) found in the Bwindi Impenetrable National Park.
- 2.44 The main causes of biodiversity loss are habitat decline, over harvesting and introduction of alien species. Many of the sectors targeted for future economic growth such as agriculture, fisheries, hydropower, tourism and pharmaceutical development depend directly on the country's biological resources.

Table 2.1 Biodiversity Hotspots in Uganda

Area	Principal Species
QE National Park	African Elephant
Kidepo National Park	Giraffes
Lake Mburo National Park	Zebra
Bwindi and Mgahinga National Parks	Mountain Gorillas
Sango Bay Area	Endemic fish, plants and birds

Lake George	Flagship species such as shoebill
Albertine Rift	Endemism for many bird and mammal species

Source State of the Environment Report for Uganda 2002

- 2.45 The key threats are deforestation in the biodiversity rich areas of the Albertine Rift and elsewhere, poaching within wildlife areas, the use of inappropriate fishing techniques, the introduction of alien species some of which have become invasive, the introduction of Nile Perch in Lake Victoria and the loss of haplochromid species and the widespread degradation of wetlands.
- 2.46 Biodiversity's contribution to the national economy is estimated by NEMA to be about USD 1,000 million per annum. Local communities in biodiversity rich areas bear the major responsibility and costs for conservation. Because they typically benefit little from biodiversity and face livelihood constraints local communities are often unwilling and economically unable to support conservation. Enabling biodiversity conservation through the provision of local economic incentives forms the basis of Uganda's National Biodiversity Strategy Action Plan. This was drafted in 2001 but has yet to be adopted.

Biological Resources of Cultural Social and Economic Importance

- 2.47 As a predominantly agrarian society, Uganda's population is heavily dependent upon biological resources for the direct maintenance of life. Of direct importance, as discussed elsewhere in this report, is the productive potential of the land, the condition of the soils and the richness of the natural vegetation
- 2.48 Population pressure leads to land degradation directly by poor farming practices and loss of traditional system of fertility maintenance or indirectly by de-forestation and incursions and changes of use of wetland.
- 2.49 At a cultural level the cattle based culture of the Karimojong is causing major problems with over-stocking that cannot be addressed in conventional management terms since cattle represent status not an economic asset. Much of the land in the area is becoming desert by a combination of over-use and drought frequency.
- 2.50 Most of Uganda's most important biological assets are now protected in designated areas. Thus rare vegetation, a variety of large mammals and tropical forests provide a source of pride for the inhabitants and also a source of revenue through tourism. The River Nile and its source, which features in the national crest, is not protected but sparks strong emotions in the people.

Fisheries

- 2.51 Uganda's fisheries are mainly a common property resource in the natural water bodies supported by some aquaculture. Fisheries make an important contribution to nutritional welfare and are also becoming an increasing export commodity and creator of jobs.
- 2.52 Fish consumption in 2002 was estimated to be 320,000 tonnes while maximum sustainable yield is estimated to be about 330,000 tonnes per annum. Projections of fish consumption would far exceed this level if current consumption in the Kampala and Lakeshore area were extended to the whole country. Table 2.2 shows the main source of fish. The effects of the

introduction of Nile Perch on Lake Victoria dramatically affected fish stocks during the 1970s but these have now recovered. The effect of the introduction of Nile Perch on the haplochromid population has received considerable attention but recent evidence shows haplochromid species recovering. Exports of Nile Perch from Lake Victoria alone are worth USD 100 million per annum.

- 2.53 There is lack of agreement as to whether current fisheries catch is above or below sustainable levels particularly on Lake Victoria although catch per unit effort has increased since the 1960s. While resource data are weak for Lake Victoria they are almost non-existent for other lakes. Lake Kyoga represents a very significant resource that is heavily fished since all the lake is easily accessible to artisanal fisherman which is not the case on Lake Victoria.
- 2.54 The principal type of fishing boat remains artisanal with only about 15 percent of 16,000 registered boats having motors. However this proportion can be expected to increase rapidly in the coming years.

Table 2.2 Source of Fisheries Catch (percent)

Year	Kyoga	Victoria	Albert/Nile	Edward/ George	Others
1961	12	44	20	21	3
1978	75	6	4	5	10
2001	35	46	14	3	2

Source NEMA 2002

- 2.55 Beyond the question of sustainable catch the main concerns facing Uganda's fisheries sector are from drought (at the end of 2005 Lake Victoria is estimated to be about 0.5 m to 1 m below long term average levels) and pollution particularly on Lake Victoria from general shipping and the risk of oil spills during tanker transit from Kisumu to Port Bell. The impact of water hyacinth has been substantially reduced by the successful introduction of bio-control under the Lake Victoria Environmental Management Project but floating weed on Lake Kyoga remains a significant problem being addressed by the Egypt-Uganda Aquatic Weed Control Project.
- 2.56 The wetland fisheries resources remain a significant, though unquantified, resource which is threatened by the overall degradation of wetlands. Wetlands maintenance is also important for healthy lake fisheries particularly on both Lakes Victoria and Kioga. Riverine fisheries, apart from on the Nile, have largely been destroyed by heavy sediment loads resulting from land degradation.
- 2.57 Under the PEAP the fisheries sub-sector is an important area of growth. The about to be established Fisheries Agency will oversee the provision of services to the sector. Local Beach Management Units are being established to ensure sustainable management at the community level.

SOCIO-ECONOMIC ENVIRONMENT

Landscape

- 2.58 The total surface area of Uganda is about 241,500 km² of which 194,000 km² is land and balance lakes and wetlands. The equator runs through the country and with the exception of the north and north-east the country is exceptionally fertile. There are a number of fine protected areas and wildlife. The landscape is attractive with mountain ranges, lakes, rivers, waterfalls and the River Nile.
- 2.59 The largest group of people are the Buganda accounting for about 16 percent of the total with eight other main groups each with about 5-8 percent of the total population and a further five groups with more than one percent of the population. There four main languages.

Environment Situation and Trends

- 2.60 Despite the prevalence of HIV/AIDS Uganda's population is expanding at the rate of about 3.5 percent per annum which will mean a doubling of the population in just over 20 years. This rapid development from a relatively small base in a predominantly agrarian community is placing enormous pressure on the environment.
- 2.61 The main environmental impacts are loss of forest, soil degradation and loss of wetlands. These are all sectors which have a profound effect on the well being of the rural population. Forest biomass provides the main source of fuel for the vast majority of the population but householders need to search increasingly further field to find adequate resources while the cleared land becomes prone to degradation. Increased population density means that traditional methods of shifting agriculture are no longer possible but farmers are either not aware or unwilling to adopt more modern production methods so that soil erosion is widespread and fertility is no longer restored by natural processes. The pressure on agricultural lands means that the vast area of wetlands are increasingly encroached and the natural resources of these areas, such as a sources of clean water and fisheries, come under increasing threat.

Living Conditions

- 2.62 In rural areas living conditions have declined particularly with respect to the increasing distance required to be travelled in order to obtain firewood. In the northern part of the country about 1.5 million people live in IDPs, fed under aid programmes and living in the most basic and distressing conditions.
- 2.63 In urban areas water quality and sanitation are a major problem with the majority of the population in most towns unable to gain access to clean water. Slums and squatter communities are also a problem in bigger towns and in Kampala in particular.
- 2.64 Access to healthcare facilities is limited to about half the population but healthcare infrastructure is dilapidated and in need of modernisation. Life expectancy is 52 and malnutrition, malaria and HIV/AIDS are the most serious diseases. Malaria remains the principal public health problem in Uganda.

- 2.65 HIV/AIDS is an extremely serious threat to the health, security and development of Uganda. Thanks to a massive publicity campaigns the overall prevalence has dropped from 30 percent in 1992 to 6.5 percent in 2001. Despite this huge improvement the situation remains precarious with an estimated 10 percent of the adult population HIV infected. The pandemic has been disruptive leaving many families with out their main wage earners while having to spend significant proportions of their meagre income on treatment.

Consequences on Human Well-being and Sustainable Development

- 2.66 Uganda maintained remarkable levels of economic growth during the 1990s which has only been slowed more recently as a result of the insurgency in the north. The incidence of poverty decreased from 56 percent in 1992 to 35 percent in 2000. For rural and urban residents the respective declines over the same period were 60 to 39 percent and 28 to 10 percent. More recently poverty has started to rise again substantially due the effects of the insurgency.
- 2.67 Uganda's economy is heavily aid dependent with foreign aid consistently providing 50-60 percent of total annual government expenditure.
- 2.68 Industrialisation continues to expand albeit at slower rates than in the past. The fastest growing sectors are brick and cement production and chemicals, paints and soaps.
- 2.69 Ugandans are now better served with road, water and air transport than they were in the 1980s. Rail transport has virtually stopped. Due to heavy investment by the GoU and its development partners around 50 percent of the district and urban roads are in reasonable condition but most community roads are in poor condition.
- 2.70 Liberalisation of the communication sector between 1996 and 2002 has lad to significant improvements in telecommunications while the mass media is booming.
- 2.71 It is possible to conclude that in the long-term Uganda has made remarkable progress in addressing poverty. Consequently it is possible to say that the well-being of Ugandans has improved somewhat thus addressing the economic development objective of sustainable development.

Land Tenure

- 2.72 The management and control of land is one factor that can minimise land degradation and enhance productivity. The Land Act 1998 recognised four tenure systems – customary, freehold, mailo and leasehold and addressed the issue of communal ownership and land management. However small land holdings and lack of information on boundaries continues to hamper improvement of land management while the absence of an overall land use policy is a significant omission.

Urban Areas

- 2.73 Compared to most countries Uganda has a relatively low urban population of about 15 percent of the total. However urban population is rapidly increasing at the rate of over 250,000 per annum and environmental degradation in urban areas is already significant and likely to become increasingly so. With the population of Kampala increasing more rapidly

than in other urban centres the Kampala City Council expect that degradation of Kampala's environment will become one of the country's main environment problems in the medium-term. No towns have urban development plans so that development tends to be unplanned and haphazard.

- 2.74 Water and sanitation are major problems in all urban centres. The National Water and Sewerage Corporation (NWSC) supplies water to 19 towns across the nation covering about 45 percent of the urban population. There are major problems in Kampala where 60 percent of urban runoff discharges into the same bay in Lake Victoria from which the city receives its water supply. Infrastructure is generally old and in need of urgent replacement. The EC have recently funded a €15 million 80.000 m³/day water treatment plant which will be completed in 2006 but the recently completed Sewerage and Sanitation Master Plan requires an estimated €80 million to be fully implemented.
- 2.75 The remaining urban centres are supplied with water and sanitation by the Directorate of Water Development. In some areas this service has been contracted out with some success but a typical small town such as Mpigi has only about one third of its population receiving safe water compared to the national average of about 55 percent. Table 2.3 shows projections for water supply and sanitation coverage over the next ten years.

Table 2.3 Water and Sanitation Service Coverage (percent of population)

Service coverage	2000	2010	2015
Rural water	49.9	80.0	95.0
Urban water	58.0	100.0	100.0
Rural sanitation	51.0	80.0	95.0

Source State of the Environment Report for Uganda 2002

- 2.76 Urban authorities have the responsibility for the cost effective removal of solid waste but resources are inadequate for providing an effective service. Solid waste management is very poor in most areas often with indiscriminate dumping with associated health problems as well as creating a threat to surface and groundwater quality. The biggest problem is the absence of a culture of sorting waste by type at the generation points so that biodegradable and non-biodegradable wastes are disposed of together in the same landfill. Waste collection and transportation operations also provide major challenges for urban authorities.
- 2.77 The rapid growth of national population has encouraged rural to urban migration with associated over-crowding, squatter settlements and slums. There have been limited significant housing development programmes in the last decade and housing backlog is high. In 1993 the National Shelter Strategy was adopted whereby GoU facilitated individual households and private suppliers to play a prominent role in the development of quality housing and in 1995 the National Population Policy was adopted to influence demographic trends in a desirable direction.
- 2.78 The main air pollution concerns centre on traffic emissions principally in the Kampala area. Also of importance are inefficient cooking stoves causing domestic air pollution leading to respiratory diseases, rudimentary brick kilns, charcoal production and bush burning. Air Quality Standards for Uganda are in the process of being implemented.

Poverty Eradication Action Plan (PEAP)

- 2.79 The PEAP provides an over-arching framework to guide public action to eradicate poverty. It has been prepared through a consultative process involving central and local government, Parliament, donors and civil society. In order to achieve middle-income status, Uganda needs to industrialise by enhancing its competitiveness. Industrialisation in Uganda will depend on using the resource base and hence on equipping farmers to understand the technical and quality requirements of commercial production. GoU will therefore ensure the provision of public goods to support both agriculture and industry and aim to increase the ability of the poorer households to participate in economic growth through self-employment inside and outside agriculture and wage employment.
- 2.80 Four core challenges for the PEAP are (a) the restoration of security, dealing with the consequences of conflict and improving regional equity (b) restoring sustainable growth in the incomes of the poor (c) human development (d) using public resources transparently and efficiently to eradicate poverty. The PEAP is grouped under five 'pillars' or components: (1) economic management, (2) production, competitiveness and incomes (3) security, conflict-resolution and disaster-management (4) governance and (5) human development.
- 2.81 From an environmental point of view Pillar 2 and Pillar 3 are of direct importance while the other pillars are of indirect importance. Under the PMA, launched in 2000, actions are being taken to promote production, competitiveness and incomes. The PMA is a major programme involving about 10 percent of GoU spending in 2003/2004. However to date environmental issues have not been particularly well represented. The extension service provided by NAADS has recently been transformed by the use of private contractors to provide advice and contractors will receive specific environmental training. A National Soils Policy is in a draft state of development and MWLE are completing an Environment and Natural Resources (ENR) Sector Investment Plan. Perhaps of most importance from an environmental perspective is a need for the development of an approved Land Use Policy and the development of effective land registries.

Energy and Emissions

- 2.82 Uganda's main energy source is from biomass accounting for about 93 percent of demand (including about 5 percent charcoal) while petroleum products account for six percent and electricity one percent of demand respectively.
- 2.83 Just under half the biomass production is obtained from protected areas. This is mainly for domestic use although about 20 percent is consumed by the commercial and industrial sectors. Sourcing of fuelwood from managed plantations is a priority being addressed by the newly formed NFA. Charcoal production is mainly to meet urban needs but its production has been a major source of deforestation in Masindi and Nakasongola Districts. There is also some energy production from biomass residues e.g. the sugar industry.
- 2.84 All petroleum products are currently imported but there are five prospective petroleum areas in Uganda mainly in the Albertine Rift and Lake Albert areas. Exploration continues slowly in these ecologically sensitive areas and gives rise to significant environmental concerns should exploitable reserves be established.

- 2.85 Uganda's hydropower potential is estimated to be about 2000 MW mainly from the Nile. Current production from the Owen Fall Dam is about 300 MW of which some ten percent of electricity production is exported and also from Kirwa Dam. Further sites have been identified on the Upper Nile and plans are in place for resuming the Bujagali HEP Project (potential capacity 300 MW) with a new developer following the withdrawal of AES Nilepower.
- 2.86 Geothermal resources are estimated to amount to about 450 MW from three sites on the western side of the country of which the Katwe field is the most promising. If developed supplies could be relatively easily connected into the grid.
- 2.87 Electricity distribution covers only about two percent of the population in rural areas and the grid mostly only covers Kampala and other major towns. Kampala currently has one 50 MW heavy fuel power station and a further two with a combined capacity of 100 MW are planned. Heavy fuel oil is brought in by road from Kenya although a pipeline is planned.
- 2.88 Limited attempts have been made to develop other renewable energy sources but as yet their contribution to meeting power demand is negligible. However the Uganda Photovoltaic Pilot Project for Rural Electrification has been successful in meeting the needs of 2000 households in four communities.
- 2.89 In 2002 the Energy Policy was approved by GoU and a draft strategy paper for decentralisation of energy policy implementation was prepared to be piloted in three districts.
- 2.90 Principal emissions are from traffic in urban areas particularly in Kampala. Vehicles are often old, poorly maintained and vehicle regulation is weak. Emissions from inefficient domestic wood stoves are a serious problem for women in rural areas in particular.

Tourism

- 2.91 Tourism declined during the early 2000s mainly due to security concerns but since has risen again to about 250,000 per year. Optimistic projections for 2006 see this number doubling. However the data are misleading in that holiday tourist number no more than about 15 percent of this total – around 30,00-40,000 per annum. The situation is reflected by the state of the Uganda Tourist Board which has no permanent offices.
- 2.92 The main tourist attractions outside Kampala remain Murchison Falls and Queen Elizabeth National Parks, the Bwindi Impenetrable National Park (mountain gorillas) and the source of the Nile (landscape and water rafting).
- 2.93 Uganda has considerable tourist potential. A pleasant climate and lush landscape supported by spectacular scenery and, in most areas, a receptive population. With the potential resolution of the northern insurgency tourism is likely to increase significantly as the parks of the north-west and the Albertine rift become readily accessible once again. There is also considerable ecotourism potential in the uplands of the districts affected by the conflict.
- 2.94 In general tourism is unlikely to have a major impact on the environment. Many of the sites are already in protected areas while a principal attraction, the mountain gorillas, are carefully managed with restricted numbers and booked up sometimes years in advance.

ENVIRONMENTAL INDICATORS

2.95 The international Environmental Sustainability Index enumerates Uganda in respect of:

<ul style="list-style-type: none">• Air Quality• Water Quality• Biodiversity• Terrestrial Systems• Reducing Air Pollution• Reducing Water Stress• Reducing Ecosystem Stress• Reducing Waste & Consumption Pressures• Reducing Population Growth• Basic Human Sustenance	<ul style="list-style-type: none">• Environmental Health• Science and Technology• Capacity for Debate• Environmental Governance• Private Sector Responsiveness• Eco-Efficiency• Participation in International Cooperative Efforts• Reducing Greenhouse Gas Emissions• Reducing Transboundary Environmental Pressures
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2.96 The above classifications reflect dozens of individual variables. A parallel exercise in producing an International Environmental Performance Index focuses on fewer variables, across a far smaller set of indicators: air quality, water quality, climate change, and land protection for which Uganda reports on climate change. These indices are at a formative stage and are perhaps less useful than local indicators being developed by NEMA.

2.97 NEMA is developing natural resource indicators for Uganda and recognises several types:

- Aggregated Indicators/Policy Level Indicators (applied to policy to evaluate options)
- Descriptive and Aggregated Policy Indicators (define targets)
- Performance Indicators (detect trends and evaluate policy impact)
- Descriptive Indicators (focus on specific problems)
- Process Indicators (looks at timed activities)

2.98 Indicators have been produced as follows:

- Environmental Indicators as presented in the NEAP
 - forest and vegetation cover (natural forest, man-made forest, savannah and rangeland, invasive and exotic species)
 - soil degradation (physical, chemical, biological, biomass)
 - wetlands
 - pollution (water, land, air)
- Macro-economic Indicators – measure development policy/strategy impact
 - wetlands
 - forest
 - water
 - fisheries
 - wildlife
 - land
- Thematic Issues Indicators
 - land/soil
 - forestry
 - rangelands
 - air
 - soil
 - water resources
- Cross-cutting Indicators

- biodiversity
- population
- poverty
- land use/cover

- 2.99 NEMA is in the process of developing natural resource indicators for Uganda and NEAP indicators use baseline data and facilitate the appreciation of trends. Thematic indicators tend to measure performance on management action/work plans or strategic plans and less on trends in the sub-sectors. The Cross-cutting Issues Indicators – biodiversity, trade, pollution, population and poverty facilitate the evaluation of environment issues within a socio-economic context. The Macro-Economic Indicators tend to reflect PEAP criteria and, as such are more useful in terms of sustainable development performance.
- 2.100 Given the considerable thought that has already gone into the process of identifying indicators for Uganda by NEMA and the diligent participatory planning that has helped to build consensus on these, the NEMA work-in-progress is an appropriate basis for future comparisons. The frequency of reporting on the indicators has still to be elaborated by NEMA.
- 2.101 The primary source for specific information on indicators, environmental quality and trends is the NEMA document (work-in-progress August 2005) entitled: Status of Indicators for Monitoring Environmental Quality and Trends in Uganda. More general sources include: the MDG 1st Progress Report for Uganda (2003) and the Environmental Sustainability Index (2002).
- 2.102 Uganda has recently embarked on measuring indicators and information is not yet available to indicate rates of change.

3. ENVIRONMENTAL POLICY, LEGISLATIVE AND INSTITUTIONAL FRAMEWORK

ENVIRONMENTAL POLICY AND LEGISLATIVE FRAMEWORK

- 3.1 The Constitution 1995 mandates the GoU to 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.
- 3.2 The National Environment Management Policy gave rise to the National Environment Statute (NES) 1995 which brought together all the sectoral agencies involved in the management of the environment. The NES promoted other methods for environmental management, such as economic instruments.
- 3.3 To promote public awareness, the NES mandates NEMA to produce a national state of the environment report every two years; while districts are required to produce theirs annually. An important aspect of the NES is that the statute empowers the minister responsible, to amend by statutory order any enactment other than the Constitution in order to give effect to, say, a convention or treaty.
- 3.4 The NES provides for incorporation of environmental education into school curriculum, and for NEMA or a local environment committee to bring action on behalf of any other person. By providing for the establishment of local as well as district environment committees, the NES has assured a bottom-up approach from the lowest level of the local council system in the environmental, decision-making process and implementation.
- 3.5 Some challenges still remain:
- The need to build the capacity of the judiciary to recognise the potential and importance of the NES
 - The need to balance between conservation and development - often weighted to the latter
 - The lack of regulations and lack of sectoral support
 - The need to develop and adopt guidelines for public access to public domain environmental documents

Environmental Policy Framework

- 3.6 Tables 3.1 to 3.3 summarise the environment policy framework for Uganda, how those policies address global and sustainability issues and measures taken by GoU to address environmental concerns.

Table 3.1 National Policies, Strategies and Action Plans for the Environment

Evaluation criteria	Assessment (strengths and weaknesses)
Existence of national policies, strategies and action plans for environment; including possible National Strategy for Sustainable Development (NSSD), National Environmental Action Plans (NEAP) etc	
<p>Uganda has many plans and strategies in place including:</p> <ul style="list-style-type: none"> • <i>Vision 2025</i> • <i>Poverty Eradication Action Plan</i> • <i>Medium Term Expenditure Framework</i> • <i>District and Sub-County Development Plans</i> • <i>Plan for Modernisation of Agriculture</i> • <i>National Biodiversity Strategy and Action Plan (awaiting approval)</i> • <i>Wetlands Sector Strategic Plan</i> 	<p><i>PEAP II</i> (which is a close representation to an NSSD) is effective in terms of transparency and accountability, communication and public awareness and in assigning implementation responsibility.</p> <p>Areas for improvement include:</p> <ul style="list-style-type: none"> • Social and poverty issues • International commitments • High-level government commitment • Co-ordination with donors • Budgetary provision
Policy response to global issues, sustainability issues (depletion of natural resources), and specific environmental issues identified above	
<p>Land use, tenure and access managed via the Constitution, and the Land Act 1998</p>	<p>Whilst there is nominal protection, this is undermined in practice by absent land ownership, land grabbing, de-gazetting, illegal building <i>etc</i></p>
<p>Land degradation and soil erosion are being challenged by the Plan for the Modernisation of Agriculture</p>	<p>The PMA attempts to deal with the projection that by the year 2032 most of the available arable land would be occupied –being undermined by poor rangeland management and bush burning</p>
<p>Water Resources – relevant responses include: Lake Victoria Environmental Management Project; Nile Basin Initiative, Shared Visions Programmes</p>	<p>Access to safe water has increased in rural areas; water hyacinth control has been effective; but poor agricultural practice continues to pollute water sources</p>
<p>Forests and trees resources – 70% is privately owned with 50% of the remainder being Central Forest Reserve and Plantation. The National Forest Plan 2002 provides for defined roles and responsibilities of local government, tax revenues, watershed management <i>etc</i></p>	<p>Fuelwood (firewood and charcoal) is a crucial part of the energy base of the country and to avoid depletion of the tropical high forest it is essential to provide alternatives. In this respect the Sawlog Production Grant Scheme is not particularly pro-poor but is a way of providing for future timber needs</p>
<p>Wetlands – 13% of Uganda’s total area – recognised by the PEAP (2000) through advocating better conversion management. Wetland inventoring is complete and monitoring protocols are established.</p>	<p>The National Policy for Conservation and Management of Wetlands Resources (1995) provides for an EIA prior to modification or restoration on wetlands – the application of this requirement is patchy</p>
<p>Wildlife is protected under Objectives XIII and XXVII of the Constitution. Challenges remain including: population pressure and poverty levels which trigger land use conflicts, poaching and encroachment</p>	<p>Of the originally gazetted protected areas only half remain as protected. Uncontrolled hunting and charcoal burning add pressure. Borders of many protected areas are to be altered to exclude areas of encroachment and to reflect new conservation priorities</p>

Table 3.2 Policy Responses to Global and Sustainability Issues

Evaluation criteria	Assessment (strengths and weaknesses)
Policy response to global issues, sustainability issues (depletion of natural resources), and specific environmental issues identified above (<i>continued</i>)	
Fisheries – now being managed through decentralisation to local authorities and a new Fisheries Authority	Capacity of districts to undertake this management is weak
Biodiversity – decentralisation of management for key natural resources has had a negative effect on biodiversity as a whole	The NBSAP requires an overall strategy for the provision of economic incentives in order to enable effective implementation
Energy and Minerals – managed through the Energy Policy 2002 with a view to decentralisation	Using fuelwood from managed plantations is a priority to safeguard native forests. There is a low installed HEP capacity compared with other Nile-riparian countries. Solar power is being considered under the Uganda Photovoltaic Pilot Project for Rural Electrification; other forms e.g. geothermal, wind and biogas are also under evaluation.
<p>Pollution – aquatic is managed through the Water Quality and Pollution Control Division</p> <p>Air quality standards are available</p> <p>Hazardous waste is controlled through NEMA</p>	<p>Discharges to water - controlled through permitting – few permits are issued (7 in 2002).</p> <p>Air quality management and hazardous waste managed is being undertaken through NEMA – though not clear what happens when NEMA funding by World Bank ceases</p>
Consistency between policies	
<p>Policies and plans for:</p> <ul style="list-style-type: none"> • Land use, tenure and access • Water resources • Forests and trees resources • Wetlands • Wildlife • Fisheries • Biodiversity • Energy and minerals • Pollution (water, air, soil) 	<p>In principle there should be good consistency between policies since NEMA has an overall responsibility for this. To a certain extent this is so, though being located in a single ministry can weaken the opportunity for influencing other, usually more powerful, ministries. Wetlands and wildlife are examples where policy is less strong, whilst forestry is stronger</p>
Environmental integration in sectoral and macro-economic policies and existence of SEA of policies	
<p>The PEAP is Uganda's Comprehensive Development Framework and the Poverty Reduction Strategy Paper, though has some way to go before it can be accepted as an equivalent National Strategy for Sustainable Development.</p> <p>The Plan for the Modernisation of Agriculture is designed to eradicate mass poverty and ensure rural transformation, through the modernisation of agriculture and development of competitive rural economies</p>	<p>Environmental issues and appreciation is threaded throughout the PEAP recognising that poverty reduction can result in significant enhancement of ecological integrity. There is no systematic application of strategic environmental assessment as yet, though SEA guidelines have now been drafted by NEMA.</p> <p>Environmental issues have been mainstreamed in the PMA for example it has been recommended that SEA is undertaken of the PMA.</p>

Table 3.3 GoU Environmental Measures

Evaluation criteria	Assessment (strengths and weaknesses)
Important measures taken by the Government to address environmental concerns	
<p>Key environmental concerns include:</p> <ul style="list-style-type: none"> • Degradation of forests and woodlands • Degradation of land • Degradation of wetlands • Loss of biodiversity and introduction of alien species • Degradation of urban areas • Water and sanitation, solid waste management and air pollution 	<p>Measures have been taken reflecting:</p> <ul style="list-style-type: none"> • An improved appreciation of the need to protect remaining native forest and to promote alternative sources of timber and fuel wood; but, • Wetlands are still not recognised as an essential resource; whilst, • Re-defining wildlife protection boundaries to reflect changed conservation priorities is more to reflect loss of areas to previous encroachment. • The basics of urban planning (water supply, sanitation, solid waste management, proliferation of slums) which are being tackled through actions by the National Water and Sewerage Corporation and through Kampala Urban Sanitation Project.
Effectiveness in achieving targets	
<p>No targets in the environmental sector have been set</p>	<p>Targets should be set for each of the identified concerns (Section 2.0)</p>

Environmental Legislative Framework

3.7 A good environmental legislative framework is in place although there are some aspects that lead to implementation weakness. These aspects include:

- Institutional rivalry
- Inadequate policy implementation in all sectors/lead agencies.
- Lack of clear guidelines and budgets for inter-sectoral activities
- Poor monitoring system in biodiversity conservation
- Political interference
- Weak enforcement mechanism and law enforcement capacity
- Lack of balancing economic needs against biodiversity conservation

3.8 Selected recent legislation with relevance to environmental matters includes:

- Constitution of the Republic of Uganda 1995
- National Environment Management Statute 1995 and its regulations
- Water Statute 1995 and its regulations
- Wildlife Statute 1996
- Rivers Act 357 1967
- Local Government Act No 1 1997

- Land Act 1998
- EIA Regulations 1998
- Water Policy 1999
- Town and Country Planning Act CAP 30 1951
- Waste management regulations 1999
- National Effluent Discharge Regulations 1999
- National Environment, Wetlands, River Banks and Lake Shores Management Regulations 2000
- National Environment Hilly and Mountainous Areas Management Regulations 2000
- Uganda Forest Policy 2001
- Forest and Tree Planting Act 2003
- Riparian Agreements regarding the River Nile

3.9 Whilst this body of law is a robust basis for environment protection, much of the implementation relies on under-resourced and poorly funded institutions such as the Forestry Inspection Division (FID), and WID at central government level, and the district offices, locally. Consequently, whilst the legislative basis is available, the enforcement basis is not.

3.10 In 1998, Parliament enacted the Foreign Treaties and Relations Act which provides for entering into international, regional agreements and conventions. Uganda has entered into several international environmental conventions and agreements:

- Convention on Wetlands of International Importance especially as Waterfowl Habitat - Ramsar Convention (1971)
- Convention Concerning the Protection of the World Cultural and Natural Heritage (1972)
- Convention on the International Trade in Endangered Species of Wild Fauna and Flora - CITES (1973)
- Convention on the Conservation of Migratory Species of Wild Animals (1979)
- Vienna Convention for the Protection of the Ozone Layer (1985)
- Montreal Protocol on Substances that Deplete the Ozone Layer (1987)
- Convention Concerning Safety in the Use of Asbestos (1986)
- Basel Convention on the Transboundary Movements of Hazardous Wastes and their Disposal

3.11 In addition, Uganda has also entered into several regional environmental conventions and agreements:

- African Convention on the Conservation of Nature and Natural Resources (1968)
- Lake Victoria Fisheries Organisation (1994)
- Lake Victoria Environment Management Programme (LVEMP)
- Kagera Basin Agreement (1997)
- Technical Cooperation Committee for the Promotion of the Development and Environmental Protection of the Nile Basin (TECCONILE)
- Cooperation Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (the Lusaka Agreement) 1996
- Inter-Governmental Authority on Development (IGAD)

3.12 As a result of the above agreements, Uganda has played an active part in regional environmental management as shown in Table 3.4. Table 3.5 provides an assessment of current and proposed legislation in meeting its objectives.

Table 3.4 Ratification status and implementation of Multilateral Environment Agreements

Evaluation criteria	Assessment (strengths and weaknesses)
<ul style="list-style-type: none"> • Convention on Wetlands of International Importance especially as Waterfowl Habitat - Ramsar Convention (1971) • Convention Concerning the Protection of the World Cultural and Natural Heritage (1972) • Convention on the International Trade in Endangered Species of Wild Fauna and Flora - CITES (1973) • Convention on the Conservation of Migratory Species of Wild Animals (1979) • Vienna Convention for the Protection of the Ozone Layer (1985) • Montreal Protocol on Substances that Deplete the Ozone Layer (1987) • Convention Concerning Safety in the Use of Asbestos (1986) • Basel Convention on the Transboundary Movements of Hazardous Wastes and their Disposal 	<p>All these agreements have been ratified</p> <p>The responsibility for ensuring compliance and submitting reports to the appropriate Convention Secretariat lies with NEMA.</p> <p>Convention reporting has been facilitated by a specific process, as described in Localising Global Environmental Conventions (2002)</p>

Table 3.5 Adequacy of (current and in preparation) environmental legislation

Evaluation criteria	Assessment (strengths and weaknesses)
<p>Land tenure and access is provided for under the Constitution and the Land Act 1998, however this nominal provision has to be reconciled with existing concerns.</p>	<p>Concerns include:</p> <ul style="list-style-type: none"> • Small and non-viable holdings • Rights to gazetted areas • Rights to natural resources • Declining land productivity • Women's land rights • Urban land • Lack of land use planning • Lack of enforcement of laws/regulations
<p>Management of natural resources is provided for under a number of legislative instruments or programmes. For instance:</p> <ul style="list-style-type: none"> • Soils – National Soils Policy 2000 • Water Resources – Water Policy 1995, LVEMP, NBI, SVP • Forest Resources – e.g. Forest Act 1964, Forest Policy 2001 • Wetlands – National Wetlands Management Policy 1996, Local Government Act 1997, PEAP 2000 • Wildlife – PAAP, Wildlife Statute 1996 • Fisheries – Fisheries Policy 2000, de-centralised to local government • Biodiversity – NBSAP • Energy – Energy Policy 2000 • Minerals – Mineral Policy 2000 • District Environmental Management Policies 	<ul style="list-style-type: none"> • Natural resources are under considerable pressure and require full rigour of enforcement to achieve the aspirations of the protecting laws. • Wildlife User Rights (helping communities develop economic enterprises based on wildlife resources) is an innovative approach to squaring resource management with poverty eradication. • Fisheries decentralisation has provided good opportunities for community participation but still suffers from capacity issues • In general de-centralisation has had a negative effect on biodiversity • Fuelwood dependence remains critical • Mining Act 1949 has been repealed and placed by Mining Act 2004 – strengthening environmental considerations

Table 3.5 Adequacy of (current and in preparation) environmental legislation (cont)

Evaluation criteria	Assessment (strengths and weaknesses)
<p>Requirements for environmental assessment such as for EIA and SEA The EIA Regulations are well established and are enshrined within the National Environmental Management Policy 1994</p> <p>SEA has been recommended for the PMA</p>	<p>EIAs are reviewed by NEMA and the number has been steadily increasing since enactment of the relevant regulation. However, the mitigations described in the EIA documentation are rarely monitored, post-development</p> <p>Not yet undertaken</p>
<p>Pollution control responsibilities</p> <p>Water – Water Quality and Pollution Control Division (WQD) under the Water Resources Management Department of the Directorate of Water Development</p> <p>Air – e.g. The Air Quality (Pollution Control in the Occupational and Ambient Environment) (Licensing and Emission Standards) Regulations, 1998 and The National Environment (Noise Control Standards) Regulations, 1998</p> <p>Soil – The enforcing agency is NEMA</p>	<p>System of pollution charging through issuing of permits</p> <p>The enforcing agency is NEMA nationally, and Kampala City Council in respect of noise in Kampala – but has not resources to do this</p> <p>Industries report their hazardous wastes to NEMA; pharmaceutical wastes are a problem</p>
<p>Adequacy of (current and in preparation) environmental legislation (continued)</p>	
<p>Development Control</p> <p>There is little provision for development control</p>	<p>EIA regulations offer an opportunity for proposing mitigations but no monitoring of the success, or otherwise, of these mitigations is reported</p>
<p>Provision and procedures for public participation in environmental issues</p>	
<p>Central government continues to devolve power to lower, local tiers of government and has provided some resources for the preparation of parish, sub-county and district environment action plans, which eventually should be incorporated into their respective development plans.</p> <p>The Uganda Forestry Policy (2000) advocates the promotion of innovative approaches to community participation in forest management on both government and private forest lands, to address the disincentives associated with a protectionist approach to forest management, and the destructive practices associated with open access to forest resources</p>	<p>Public participation is enshrined in the EIA regulations and is carried out in practice.</p> <p>In addition to statutory requirements or government policy, public participation in environmental decision making is further being encouraged by the many local and international NGOs in the country. New NGOs are emerging whose central focus is lobbying and advocacy in environmental issues. Ugandan NGOs active in advocacy and lobbying include Uganda Wildlife Society (UWS) and the Advocates Coalition for Development and Environment (ACODE).</p> <p>In the context of decentralised environmental management, the District Environment Committee (DEC) is mandated to ensure free and open participation of the communities in its deliberations and in the formulation of bye-laws. Likewise, the District Environment Officer (DEO) must also ensure that the views of the community are genuinely represented in the DEC recommendations to the District Development Committee and the District Council.</p>

Table 3.5 Adequacy of (current and in preparation) environmental legislation (cont)

Effectiveness of legislation enforcement	
With the exception of regulated planning control, the legal basis for legislative protection of the environment is available	Beyond the issuing of permits in respect of wastewater disposal and the reviewing of EIAs, little enforcement is formally undertaken. Forestry sector and the Wildlife sector probably have the best developed processes
Use of other (non legislative) instruments, e.g. market-based mechanisms, voluntary schemes (environmental management systems, environmental labelling, industry-government agreements)	
GoU is encouraging a sector-wide approach (SWAp) to planning e.g. education, roads, health, water, agriculture.	Work continues on developing this for forestry and for wildlife. An ENR budget framework is in place
Potential impact of non-environmental legislation	
Revised legislation on mining (Mining Act 2004)	Its provisions have potential to improve environmental protection

ENVIRONMENTAL INSTITUTIONAL FRAMEWORK

- 3.13 Institutional weaknesses for environmental protection were identified during the NEAP process. Subsequently, the National Environment Management Policy advocated a new institutional structure, the National Environment Management Authority (NEMA) which was provided for in the National Environment Statute 1995. NEMA is the principal agency in Uganda for the management of the environment with the express mandate to coordinate, monitor and supervise all activities in the field of the environment.
- 3.14 NEMA is not an implementing institution and performs its duties through cooperation with other institutions. NEMA is horizontally linked to the lead agencies in the environment sector. NEMA is also vertically linked to the local government structure, the private sector, and civil society.
- 3.15 The Local Government Act 1997 provides for the devolution of governance from the centre to the districts and lower levels. The District Council is the highest level of governance at sub-national level. One of its roles is to ensure the integration of environmental issues in the development planning process. The District Council has direct linkage with the District Support Coordination Unit of NEMA, which provides guidelines for the establishment of district environment committees in consultation with the district councils. Environment Committees are also established at sub-county, parish and village levels, although the lowest level of government is the sub-county.
- 3.16 The district environment committees are expected to ensure that environmental concerns are integrated in the district plans and projects, formulate bye-laws, promote dissemination of environmental information, and prepare the district state of environment reports annually. Most districts have already formed their environment committees and prepared their first and subsequent state of environment reports with the technical assistance of NEMA. However,

the capacity of the environment committees at various levels of local government is still weak. NEMA is currently located within the Ministry of Water, Lands and Environment which makes it difficult for NEMA to co-ordinate environmental affairs in other ministries. In addition, NEMA is not sustainably funded.

Table 3.6 Institutions with Environmental Responsibilities

Evaluation criteria	Assessment (strengths and weaknesses)
Identity, number and quality of institutions (involved in policy making, legislation, planning, environmental protection, monitoring and enforcement)	NEMA – well respected, reasonably resourced FID – not really able to perform monitoring function WID – able to perform inventorying DFS – not really able to perform supporting function DEO – produced reports
Level of coordination and decentralisation	NEMA is a co-ordinating body and is able to provide some support to the District level. Decentralisation has proceeded in advance of the capacity of local government to take up the opportunity
Strength and capacity of individual institutions	NEMA –World Bank funding ceases in 2006 FID – under-resourced WID – under-resourced but extra funding likely soon DFS – little resourcing DEO - little capacity to act
Influence on other institutions	NEMA is able to influence
Good governance practices	Strong political support for ENR management. NEAP made fundamental recommendations in 1994 integrating national policy with environmental protection – resulting in the National Environmental Management Policy which later resulted in the NES. District Environment Committees are required to ensure free and open participation of communities in its deliberations and in formulation of bye-laws.
Capabilities, means, functioning of environmental services	The NES provides for various fees/fines which could activate the National Environment Fund. Other sectoral laws call for creation of similar funds – Wildlife, Forestry Fisheries Management <i>etc</i>
Major NGOs, institutes or other organisations involved in environmental management or policy	ACODE, CARE, Clean up Uganda Environmental Alert, Greenwatch and Ugandan Wildlife Society
Public Participation	
Transparency and access to environmental information	Greater transparency of land titling process PEAP and PMA translated into local languages SoE report available to all – direct distributed or via recognised distribution centres
Role of NGOs and civil society in environmental decision-making	NGOs and CBOs are active with some receiving funding from development partners
Effective participation	In the context of decentralised environmental management, the District Environment Officer must ensure that views of the community are genuinely represented in the recommendations to the District Development Committee and the District Council.
Access to justice in environmental matters	Little information is available on this

Table 3.7 Environmental Services and Infrastructures

Evaluation criteria	Assessment (strengths and weaknesses)
<p>Protected Areas: number, areas, relevance, and effectiveness</p>	<p>Wildlife protected areas are designated National Parks, Wildlife Reserves, Sanctuaries <i>etc</i> - their areal sizes <i>etc</i> are provided in Technical Annex 7.2.3). Forestry protected areas number several hundred and are logged on the NFA database indicating the environmental services that they provide.</p>
<p>Sanitation and waste treatment infrastructure</p> <p>The national infrastructure covers 19 towns, 120,000 customers, 98% metered and an overall population of 1.55 m of whom 2/3rd are in Kampala.</p> <p>Other areas covered by Directorate of Water Development who sub-contract to local companies</p> <p>Sewerage and Sanitation Master Plan for Kampala by Mott Macdonald (2004) total investment USD 96M to completely satisfy Kampala requirements</p> <p>Kampala Urban Sanitation Project (5Meuro) focuses on the urban population and began in 2002</p> <p>Other programmes include Swedish funding of eco-sanitation scheme (technology transfer for good environmental practice)</p>	<p>Kampala water supply from Lake Victoria but 60% of urban runoff discharges to the same bay so quality is a problem.</p> <p>Wastewater treatment by waste stabilisation ponds but difficult to get funding for WWT works.</p> <p>Planning not enforced – need capacity building in KCC</p>
<p>Disaster prevention systems</p> <p>Natural or anthropogenically-induced disasters e.g.</p> <ul style="list-style-type: none"> • floods • drought • ecological dynamics • wars and conflicts • HIV/AIDS <p>GoU has undertaken the construction of valley dams and tanks in areas called the cattle corridor to ensure that livestock have adequate water all year round.</p> <p>Under the Uganda Water Action Plan, GoU is to increase the coverage of people with access to safe water both in the rural and urban areas and to improve sanitation as well.</p> <p>The Plan for Modernisation of Agriculture - Pilot Irrigation Schemes are going to be promoted.</p> <p>Another initiative is the growing of fast maturing food crop varieties, which do well under the current low rainfall patterns in the affected parts of the country.</p>	<p>GoU is building capacity in the Meteorological Department to enable it to provide accurate information in a timely manner to reduce the socio-economic impact of floods.</p> <p>Under the National Disaster Preparedness and Management Policy Framework being prepared by the Ministry of Disaster Preparedness and Refugees, it is proposed that a Flood Detection and Warning System be developed in a participatory manner involving all stakeholder groups.</p> <p>It is also proposed that a Master Plan for Flood Plain Management be developed</p>
<p>Emergency response mechanisms</p>	<p>Meteorological Department to provide accurate information in a timely manner to reduce the socio-economic impact of floods.</p> <p>Flood Detection and Warning System to be developed</p>

Table 3.8 Environmental Monitoring System

Evaluation criteria	Assessment (strengths and weaknesses)
Emergency response mechanisms	<p>Meteorological Department to provide accurate information in a timely manner to reduce the socio-economic impact of floods.</p> <p>Flood Detection and Warning System to be developed</p>
<p>The international Environmental Sustainability Index lists Uganda in respect of aggregated indicator classifications reflecting dozens of individual variables. A parallel exercise in producing an International Environmental Performance Index focuses on a smaller set of variables across a far smaller set of indicators: air quality, water quality, climate change, and land protection for which Uganda reports on climate change.</p>	<p>These two indices are in their formative stages and are perhaps of less active utility than a set of local indicators.</p> <p>NEMA is in the process of developing natural resource indicators for Uganda:</p> <ul style="list-style-type: none"> • Environmental Indicators • Macro-economic Indicators • Thematic Issues Indicators • Cross-cutting Indicators
Measurement of the indicators: periodicity, liability	The development of indicators is still its formative stages and issues of periodicity, liability <i>etc</i> are still to be addressed
<p>Macro-economic Indicators which measure development policy/strategy impact have been developed for:</p> <ul style="list-style-type: none"> ○ Wetlands ○ Forest ○ Water ○ Fisheries ○ Wildlife ○ Land 	The macro-economic indicators tend to reflect PEAP criteria and, as such are more useful in terms of sustainable development performance.

INTEGRATION OF ENVIRONMENTAL CONCERNS INTO THE MAIN SECTORS

3.17 The key environmental pressures identified in Section 2 are:

1. Population growth
2. Associated widespread poverty
3. Deforestation and encroachment
4. Land degradation
5. Land tenure and fragmented holdings
6. Wetlands degradation
7. Climate variability and increase of drought incidence
8. Water and sanitation in urban centres
9. Solid waste management in urban centres
10. Loss of biodiversity and introduction of alien species
11. Threat to fisheries in lakes, rivers and wetlands

3.18 The primary sectors most affected by, or which could influence, the above environmental issues shown in Figure 3.1

Fig 3.1 Sector Influence on Environmental Issues

Environmental Pressures	Population Growth	Widespread Poverty	Deforestation, Encroachment	Land degradation	Land Tenure	Wetlands Degradation	Climate Variability	Water, Sanitation	Solid Waste Management	Threats to Biodiversity	Threat to Fisheries
SECTOR	1	2	3	4	5	6	7	8	9	10	11
Security											
Roads and Works											
Agriculture											
Forestry											
Education											
Health											
Water & Sanitation											
Justice Law & Order											
Accountability											
Economic Functions and Social Services											
Public Administration											

3.19 The PEAP is the primary policy vehicle by the GoU integrates environmental concerns into the sectors. The main measures currently include:

- A SWAp approach for the ENR sector;
- Land reform to clarify land rights and strengthen the rights of the poor, especially for women;
- Improvement of the land registry and strengthening the land rights of the poor through systematic demarcation;
- Urban land reform to organise the urban housing better;
- Encouragement of private participation in forestry while protecting Central Forest Reserves;
- More support to District and community forests and strengthening of the District Forest Services;
- Piloting of community forest initiatives;
- Fisheries Agency will oversee the provision of services and local beach management units are to be established to ensure sustainable management at the community level;
- Continue ongoing programmes to protect wetlands and wildlife; and,
- Strengthen the meteorological service to provide farmers with usable and accurate information to improve production decisions in agriculture.

3.20 Forestry is also the focal sector for current and potential EC co-operation. Proposed focal sectors for 10th EDF are transport and the PMA. There are a number of aspects of the PMA that have implications for environmental protection particularly in relation to wetlands management, the establishment of forests for carbon credit and the private sector and community involvement in tree planting (the Sawlog Production Grant Scheme). Environment mainstreaming should be promoted for all sectors.

3.21 Strategic Environmental Assessment was recommended for the Plan for the Modernisation of Agriculture – this recommendation has not been taken up to date. It would still be a valid exercise as would SEAs for the critical sectors of forestry, wildlife and wetlands.

4. EC AND OTHER ENVIRONMENTAL DONOR CO-OPERATION

EC CO-OPERATION FROM AN ENVIRONMENTAL PERSPECTIVE

- 4.1 The EC funded interventions in environment (including forestry) in the last five years are shown in Table 4.1

Table 4.1 EC Environment Interventions 2001-2006

EC (+ Donor partners)	Intervention
France	Digital mapping project
	Emergency rehabilitation of Gaba I
	Forest Resource Management & Conservation Programme
NSF, SNV, UK	Gravity flow schemes
	Mid-western towns water & sanitation
Norway, UK, UNDP	Support to National Forestry Authority
CARE, ITALY, LWS, UK, UNHCR	Rural water & san-borehole drilling
AUSTRIA, GERMANY, IDA	Second water supply project
	National parks and wildlife services
	Rehabilitation of coffee pulperies
GERMANY	Support to national parks – EC roads
IDA, NORWAY	Forestry rehabilitation project (peri-urban)

- 4.2 Currently there are no programmes planned, though an extension to the Sawlog Production Grant Scheme under the FRMCP is under consideration (within the 10th EDF).
- 4.3 General experience indicates that interventions have to overcome some institutional rivalry, inconsistent policy implementation in lead agencies and a poor monitoring system in biodiversity conservation. The underlying weak enforcement mechanism and law enforcement capacity is pervasive.
- 4.4 Relatively little information is readily accessible about the EC interventions, in the table above, other than those captured under the FRMCP. This programme has been subject to a Mid-Term Review (July 2004) and identified certain issues that may have applicability for other EC projects – ensuring a participatory approach, encouraging community opportunity for involvement, and ensuring relevant skill development
- 4.5 Interventions under the 9th EDF were to concentrate one sector. This was later expanded resulting in the selection of roads/infrastructure, PMA/rural development, and macro-economic support (health and education). Human rights/good governance was also included. Implementation faced many problems and delays.

- 4.6 The primary effects of EC interventions occur in the districts where monitoring capability is weak or completely lacking. As a result, the environmental impacts of EC co-operation, other than those directly envisaged as part of the intervention, are rarely recorded or logged within the institutional memory.
- 4.7 The primary risk is that intervention is so focussed on achieving its specific objectives and targets that secondary effects may not be fully appreciated at the time or may lack priority. An example is that of the SPGS project. Efforts were made early on to focus planting near to areas of forest that were experiencing 'pressure' but in reality the locations were dictated more by economic and practical reasons. The 'compensatory' argument for timber plantations is more a national than local issue. The country's need for timber is national and particularly around Kampala and other developing urban centres. This does not necessarily help take pressure off threatened areas by having plantations close by, though it could do so to a small extent, as plantations will provide some firewood and poles from thinnings. In the next phase of the SPGS, currently being discussed, it is hoped to at least encourage more planting in such pressure areas, however, commercial tree planting depends more on economies of scale (i.e. having large blocks of land) and also having the right quality of land to obtain good timber yields.
- 4.8 Over the last four years, donor aid, generally, to GoU has been shared approximately equally between budget support and project aid. As well as a preference by the GoU for budget support over project aid, GoU prefers general budget support over sector budget support. Sector expenditure ceilings are determined centrally through the national budget process, on the basis of the government's strategic spending priorities, not by how much sector support donors are promising to favoured certain sectors.
- 4.9 The implications for the environment are that a much closer co-operation and alignment between donors will be necessary to optimise interventions. There is an opportunity therefore to strengthen tiers of government that are not typical recipients of aid whilst addressing the pervasive challenge of weak governance at lower tiers.
- 4.10 For the Country Strategy Paper (CSP) development harmonisation with other donors via the Uganda Joint Assistance Strategy (UJAS) is a possibility, though it is not yet clear how the UJAS could align with the 10th EDF CSP. The UJAS and increased donor harmonisation is in line with PEAP principles; the PEAP remains the guiding policy document.

CO-OPERATION FUNDED BY OTHER AGENCIES FROM AN ENVIRONMENTAL PERSPECTIVE

- 4.11 A number programmes and projects with an environmental focus or anticipated impact have been funded by donors other than the EC (including EU member states). A non-exhaustive list of these is provided in Technical Annex II.
- 4.12 Co-ordination between donors and the EC is primary via the ENR Donor Group. In principle this should offer an effective mechanism for donors to align their interventions. In practice, the meetings are not always fully attended and some lack of continuity occurs. In addition, some donors may prefer to use the group to remain updated on ENR donor activity generally, rather than as a proactive tool with which to guide or harmonise specific donor interventions.

- 4.13 With few exceptions, donors have increased the share of programme aid notably SWAps, other basket funding and budget support. These modalities have facilitated harmonisation and have a strong potential to reduce donor transaction costs in the long run.
- 4.14 GoU expressed its preference for budget support instead of project aid. Budget support has changed the dimension of GoU ownership, making it both stronger and more vulnerable to general political opinions in the donor countries. The GoU emphasises strongly the need for predictability of budget support disbursements. Delay of budget support has normally more serious budget liquidity effects than delays in projects. Budget support is by many donors considered to be a more “political” modality, and therefore risks volatility, should events occur that are considered to be contradictory to the basis for the long-term co-operation.
- 4.15 Non-basket donors (such as USAID) should not be excluded, as the aim should be as much co-ordination and harmonisation as possible, between all donors.
- 4.16 Budget support and basket programme support strengthen the government ownership and changes its quality. Budget support and SWAps are long-term commitments and have the potential to avoid the traditional go-stop-go situations. GoU has emphasised this in the PEAP by stating that a shift from the magnitude of aid to changes in the composition of aid; its predictability and in the manner in which donor aid programmes are articulated with the government budget, is crucial.
- 4.17 In line with the PEAP priorities, it envisages an increase in the sector shares of the budget for agriculture, roads and works, education and health. Strengthening budgeting at the sector level will be crucial to achieving the PEAP objectives. SWAps, which have already generated important benefits for budget planning, will be extended to cover all areas of the budget, and all budget submissions by line ministries and other spending agencies must be consistent with the relevant sector expenditure plan. All projects, including donor funded projects, will have to satisfy a range of criteria, including affordability within the relevant sector ceiling.
- 4.18 This has clear implications for non sector-based environment interventions; a much closer co-operation and alignment between donors will be necessary to optimise interventions.

5. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

- 5.1 Natural resources in Uganda are under considerable pressure, and require the full rigour of policy application and regulatory enforcement to achieve the aspirations of the protecting laws. The principal driver threatening the natural resource base is population growth with the associated issue of widespread poverty. Uganda is an agrarian society and looks to its natural resource base for the supply of shelter, food and water, fuel, cash crops and livelihood security in general.
- 5.2 The key pressures on the natural resources are well-described in the many State of Environment reports; deforestation and encroachment, land degradation due to poor management and over-grazing, land tenure and fragmented holdings inhibiting the introduction of good land management practices, wetlands degradation through illegal development, encroachment and other uses, threats to fisheries from over exploitation and from silting arising from land degradation, climate variability and increase of drought incidence, water and sanitation in urban centres, solid waste management in urban centres, loss of biodiversity and introduction of alien species.
- 5.3 The natural resource policies are, in general, written and available and entirely capable of protecting the relevant assets; soils, water resources, forest resources, wetlands, wildlife, fisheries, biodiversity, energy and minerals. District environmental management policies are also appropriately focussed.
- 5.4 Some positive developments include the Wildlife User Rights which assist communities to develop economic enterprises based on wildlife resources and is an innovative approach to squaring resource management with poverty eradication.
- 5.5 A significant hurdle to the successful implementation of policies, regulations and institutional responsibility is the process of decentralisation. Whilst decentralisation is a potentially appropriate mechanism for enhanced natural resource base protection, the process of decentralising has proceeded at a pace that has outstripped local government capability to operationalise the opportunity, based on current funding priorities.
- 5.6 In general, decentralisation has had a negative effect on the natural resource base, its enhancement and protection.
- 5.7 The institutional strength at district level is weak and largely incapable of delivering its mandate of environmental protection and management.
- 5.8 Figure 5.1 indicates some of the constraints and challenges.

Fig 5.1 Matrix showing environmental pressures and main sectors - constraints and challenges

Environmental Pressures	Population Growth	Widespread Poverty	Deforestation, Encroachment	Land degradation	Land Tenure	Wetlands Degradation	Climate Variability	Water, Sanitation	Solid Waste Management	Threats to Biodiversity	Threat to Fisheries	
SECTOR												
Security	Maintaining stability					●				●		
Roads and Works	EIAs, planning control						●		●			
Agriculture	SEA, PMA implementation						●			●		
Forestry	Boundary enforcement						●			●		
Education	Awareness											
Health	●		●			●	Causes		●		●	
Water & Sanitation	●		●	Safe practices								
Justice Law & Order	Enforcement		●			●						
Accountability	Transparency		●		●	●		●				
Economic Functions and Social Services	●		●	Prioritising environment								
Public Administration	Strengthen, reform											
<i>Shading: Sectoral constraints and challenges to managing environmental pressure</i>												

RECOMMENDATIONS

- 5.9 The primary aid delivery approach or modality should be via budget support and SWApS (including projects within this) rather than by any non-SWApS, project-based intervention. A pervasive, and potentially undermining, issue that seriously threatens environmental improvement in Uganda is the lack of capacity and resources at the District level. Modalities of budget support and SWApS are ideally suited to engaging and energising institutional capacity weakness at this level of local government.
- 5.10 The ENR donor group offers a mechanism by which complementarity, synergy and harmonisation could leverage environmental development opportunities especially through the continued application of budget support and SWApS. However, to be effective a monthly update of individual activities would be more proactive. Harmonisation with other donors via the Uganda Joint Assistance Strategy (UJAS) is a possibility, though it is not yet clear how the UJAS could align with the 10th EDF CSP. The UJAS and increased donor harmonisation is in line with PEAP principles.
- 5.11 Recognising that the institutional strength of the District tier of local government is weak and largely incapable of delivering its mandate of environmental protection and management, there is an opportunity for ensuring that the existing environmental actions are secured through support to the District level. A strong District environmental capability is necessary to safeguard sectoral interventions and direct technical interventions at local level.

- 5.12 No further additional studies are needed to better understand policy-environment relationships in order to enhance the degree of environmental integration. The principles of environmental integration are well-understood and merely require active application. Strategic Environmental Assessment has not been rigorously applied to policies and sectoral programmes. Guidelines have been prepared and their adoption is to be encouraged.
- 5.13 NEMA has done useful development work on the national environmental indicators and this could be reinforced by encouraging the completion of this work and the subsequent promotion of an agreed selection of indicators.

SECTORAL

- 5.14 If further intervention is being considered on a sectoral basis then forestry would be an appropriate focus, via the NFA, for further protection of the CFR and for community-based forestry based programmes (e.g. fuelwood plantations) to address basic energy requirements of the poor.

INSTITUTIONAL

- Additional human resources for the MWLE (including WID and FID)
- GIS, computer, means of transport for each District office
- Central repository of environmental information for the benefit of GoU, parastals, local government, NGOs and donors (including a web-based facility)

CONSTRAINTS TO PREPARING THE PROFILE

- 5.15 There were two predominant constraints to preparing this profile. Firstly, the lack of a central data resource in the country of previous interventions, studies *etc.* Considerable time was used to obtain information which should have been readily available. Mission time could have been better deployed on evaluation and appreciation of the information instead of having to seek it out. Secondly, there is a lack of institutional memory. This is very noticeable in GoU but also is prevalent in the donors, with few exceptions. Both of the above factors consumed mission time in assembling information.

6. COUNTRY STRATEGY PAPER ENVIRONMENTAL ANNEX SUMMARY

STATE OF THE ENVIRONMENT

Physical Environment

- 6.1 Land degradation is one of the main environmental issues facing Uganda. Over 80 percent of the country's population lives in rural areas and population is doubling every 20 years at the current rate of growth.
- 6.2 The key land degradation issues are soil erosion, decreasing soil fertility, agrochemical pollution and a tendency towards desertification. The main causes are population pressure, inappropriate land management practices and on rangelands over-stocking.
- 6.3 The main water environment concerns are the issues of quality and access. The main threats to quality include eutrophication, pollution, and the proliferation of invasive plants.
- 6.4 Tropical high forest has declined from a total of 13 percent of the total area (35,000 km²) in 1900 to about 7,000 km² in 2005. The Central Forest Reserve (CFR) currently covers some 12,000 km² and includes about half of the tropical high forest. Overall 70 percent of the nation's forests are not protected; they act as the nation's main fuel source and are becoming increasingly degraded.
- 6.5 Encroachment, involving the conversion of gazetted forest land to agriculture, has become a major problem throughout the nation and per capita forest has declined from 0.3 ha in 1990 to 0.1 ha in 2004. A fuelwood crisis is looming as demand exceeds supply with rising population. The average distance travelled to collect firewood has risen from 0.06 km in 1992 to 0.73 km in 2000.
- 6.6 Uganda's wetlands support a rich diversity of plants and animals and serve an important natural role for sediment, nutrient and toxin retention, stabilisation of the hydrological cycle, harbouring biodiversity, biomass production and water supply in rural areas. They are under threat in many ways including from encroachment, brick production, drainage and pollution.
- 6.7 As a consequence of civil strife Uganda has about 555,000 IDPs located in six districts. In addition there are a further 190,000 refugees from wars in neighbouring countries.

Biological Environment

- 6.8 Uganda's biodiversity is one of the highest on the continent and is estimated by NEMA to be worth about USD 1,000 million per annum. The main causes of biodiversity loss are habitat decline, over harvesting and introduction of alien species. Many of the sectors targeted for future economic growth depend directly on the country's biological resources.

- 6.9 Most of Uganda's most important biological assets are now protected in designated areas. Thus rare vegetation, a variety of large mammals and tropical forests provide a source of pride for the inhabitants and also a source of revenue through tourism.
- 6.10 Fisheries are under threat from land degradation causing excessive silt loads in lakes and rivers. There are questions of sustainable catch and threats from drought and pollution and floating weed.

Socio-economic Environment

- 6.11 Access to healthcare facilities is limited to about half the population but healthcare infrastructure is dilapidated and in need of modernisation. Life expectancy is 52 and malnutrition, malaria and HIV/AIDS are the most serious diseases. Malaria remains the principal public health problem but HIV/AIDS is also an extremely serious threat. Thanks to a massive publicity campaigns the overall prevalence has dropped from 30 percent in 1992 to 6.5 percent in 2001 but the situation remains precarious. The pandemic has been disruptive leaving many families without their main wage earners.
- 6.12 Although addressed by the Land Act 1998 land ownership remains confused in many areas and plots fragmented and small. There is no easy solution to this problem which is likely to have a major impact for years to come but the absence of an overall land use policy is a significant omission.
- 6.13 Water and sanitation are major problems in all urban centres with the majority of the population in most towns unable to gain access to clean water. Slums and squatter communities are also a problem in bigger towns and in Kampala in particular.
- 6.14 Uganda's main energy source is from biomass accounting for about 93 percent of demand (including about 5 percent charcoal) while petroleum products account for six percent and electricity one percent of demand respectively. Just under half the biomass production is obtained from protected areas.

Environmental Indicators

- 6.15 NEMA is developing natural resource indicators for Uganda and recognises five basic types. Given the considerable thought that has already gone into the process of identifying indicators for Uganda by NEMA and the diligent participatory planning that has helped to build consensus on these, the NEMA work-in-progress is an appropriate basis for future comparisons.

ENVIRONMENTAL POLICY, LEGISLATIVE AND INSTITUTIONAL FRAMEWORK

Policy

- 6.16 The National Environment Management Policy gave rise to the National Environment Statute (NES) 1995 which brought together all the sectoral agencies involved in the management of the environment. Although the NES has assured a bottom-up approach from the lowest level in the environmental, decision-making process and implementation, some challenges still

remain; the need to build capacity of the judiciary, the need to balance between conservation and development - often weighted to the latter, the lack of sectoral support and the need to develop and adopt guidelines for public access to public domain environmental documents

- 6.17 Uganda has many plans and strategies in place including; Vision 2025, Poverty Eradication Action Plan, Medium Term Expenditure Framework, District and Sub-County Development Plans, Plan for Modernisation of Agriculture etc. The second PEAP is effective in terms of transparency and accountability, communication and public awareness and in assigning implementation responsibility. The main areas for improvement include: social and poverty issues, international commitments, high-level government commitment, co-ordination with donors and budgetary provision.
- 6.18 Land use, tenure and access though managed via the Constitution and the Land Act 1998, suffer from nominal protection. In practice, absent land ownership, land grabbing, de-gazetting, illegal building etc all contribute to a confused ownership. Several potentially good environmental initiatives are thwarted and compromised by the land tenure issue.
- 6.19 Although there are a number of policy initiatives to deal with water resources, forests, wetlands, wildlife and so on, several challenges remain including: population pressure and poverty levels which trigger land use conflicts, poaching and encroachment. Burgeoning population growth and associated poverty will only compound policy weakness.

Legislation

- 6.20 A good environmental legislative framework is in place although there are aspects that lead to implementation weakness including; institutional rivalry, inadequate policy implementation, lack of clear guidelines and budgets for inter-sectoral activities, poor monitoring system in biodiversity conservation, political interference, weak enforcement and law enforcement capacity, and lack of balancing economic needs against biodiversity conservation.
- 6.21 Whilst there is a body of law with a robust basis for environment protection, much of the implementation relies on under-resourced and poorly funded institutions such as the FID, and WID at central government level, and the district offices, locally. Consequently, whilst the legislative basis is available, the enforcement basis is not.
- 6.22 Uganda has entered into several international and regional environmental conventions and, as a result, has played an active part in regional environmental management.
- 6.23 Of the existing legislation, land tenure and access has nominal provision but this has to be reconciled with existing concerns of; small and non-viable holdings, rights to gazetted areas and natural resources, declining land productivity, women's land rights, urban land and lack of land use planning. The management of natural resources is provided for under several legislative instruments but the resources are under considerable pressure and require full rigour of enforcement to achieve the aspirations of the protecting laws.
- 6.24 Central government continues to devolve power to local government and has provided some resources for the preparation of parish, sub-county and district environment action plans, which eventually should be incorporated into their respective development plans. Fisheries

decentralisation has provided good opportunities for community participation but still suffers from capacity issues. In general decentralisation has had a negative effect on biodiversity.

Institutions

- 6.25 Institutional weaknesses for environmental protection were identified during the NEAP process. Subsequently, the National Environment Management Policy advocated a new institutional structure, the National Environment Management Authority (NEMA) which was provided for in the NES. NEMA is located under MWLE and is the principal agency for the management of the environment with the express mandate to coordinate, monitor and supervise all activities in the field of the environment. It is horizontally linked to the lead agencies in the environment sector, and vertically to the local government structure, the private sector, and civil society. NEMA is not sustainably funded.
- 6.26 NEMA is in the process of developing natural resource indicators. Macro-economic indicators which measure development policy/strategy impact have been developed for; wetlands, forests, water, fisheries, wildlife and land, tend to reflect PEAP criteria.
- 6.27 The Local Government Act 1997 provides for the devolution of governance from the centre to the districts and lower levels. The District Council is the highest level of governance at sub-national level. One of its roles is to ensure the integration of environmental issues in the development planning process. Environment committees are also established at sub-county, parish and village levels, although the lowest level of government is the sub-county.
- 6.28 The district environment committees are expected to ensure that environmental concerns are integrated into district plans and projects, formulate bye-laws, promote dissemination of environmental information and prepare the district state of environment reports annually. Most districts have formed environment committees and prepared their first and subsequent state of environment reports with the technical assistance of NEMA. However, the capacity of the environment committees at various levels of local government is still weak.
- 6.29 There are a number of active NGOs including ACODE, CARE, Clean Up Uganda, Environmental Alert, Greenwatch, and the Ugandan Wildlife Society.

EC AND OTHER ENVIRONMENTAL DONOR CO-OPERATION

EC Co-operation from an Environmental Perspective

- 6.30 Several EC-funded interventions in environment have been undertaken during the last five years. Currently there are no programmes planned, though an extension to the Sawlog Production Grant Scheme under the FRMCP is under consideration (within the 10th EDF). Relatively little information is readily accessible about the EC interventions other than those captured under the FRMCP. The FRMCP Mid-Term Review (July 2004) identified issues that have applicability for other EC projects – participatory approaches and ensuring relevant skill development. General experience indicates that interventions have to overcome institutional rivalry and inconsistent policy implementation in lead agencies.

- 6.31 The primary effects of EC interventions occur in the Districts where monitoring capability is weak. As a result, the environmental impacts of EC cooperation, other than those directly envisaged as part of the intervention, are rarely recorded within the institutional memory.
- 6.32 Over the last four years, donor aid, generally, to GoU has been shared approximately equally between budget support and project aid. GoU prefers budget support over project aid, and general budget support over sector budget support. Sector expenditure ceilings are determined centrally on the basis of the government's strategic spending priorities, not by how much sector support donors are promising to favoured certain sectors. The implications for future EC interventions in the field of environment are that a much closer co-operation and alignment between donors will be necessary to optimise interventions. There is an opportunity therefore to strengthen tiers of government that are not typical recipients of aid whilst addressing the pervasive challenge of weak governance at lower tiers.
- 6.33 For the Country Strategy Paper, development harmonisation with other donors via the Uganda Joint Assistance Strategy (UJAS) is a possibility, though it is not yet clear how the UJAS could replace the 10th EDF CSP. The UJAS and increased donor harmonisation is in line with PEAP principles; the PEAP remains the guiding policy document.

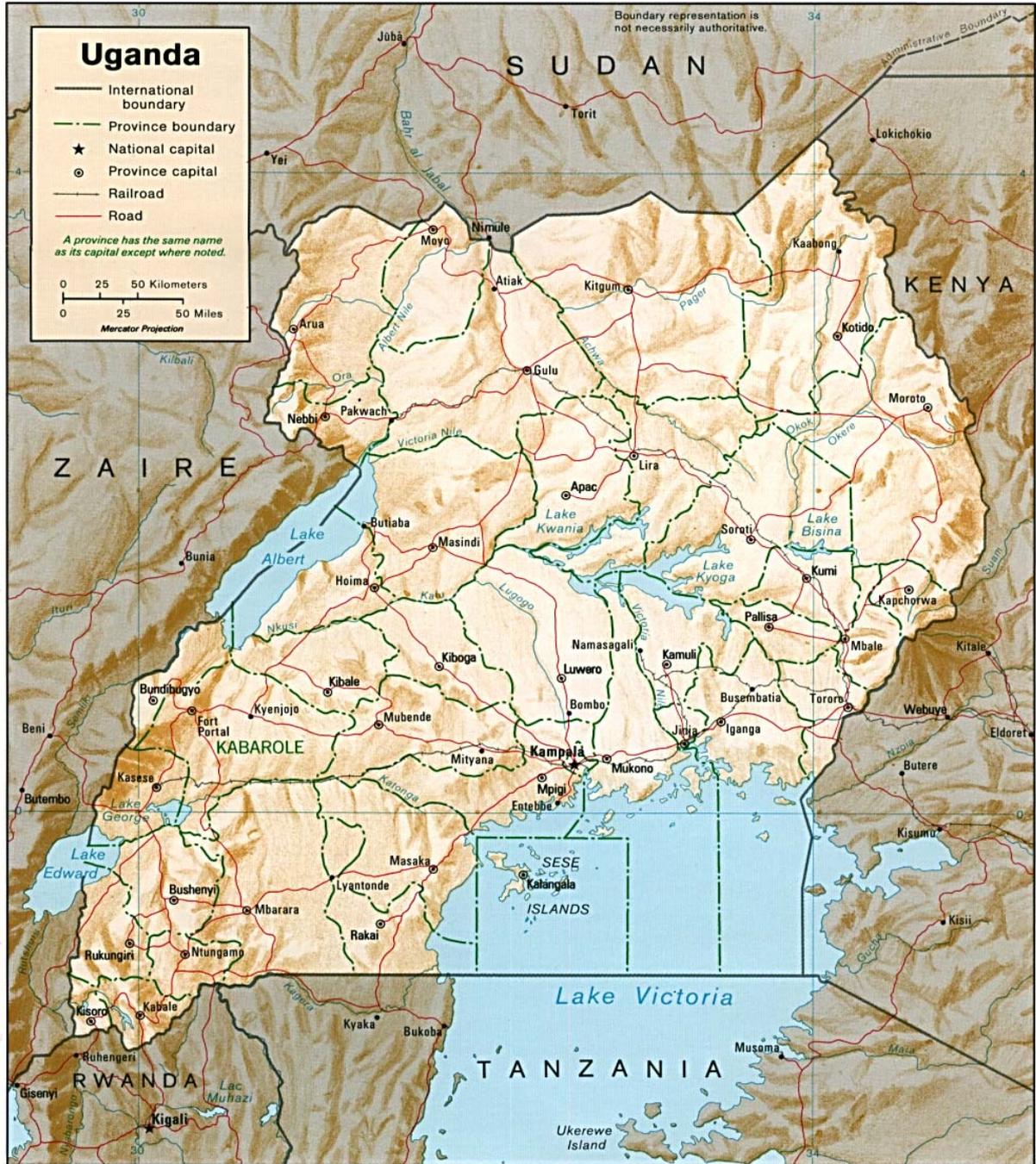
Co-operation funded by other Agencies from an Environmental Perspective

- 6.34 A number programmes and projects with an environmental focus or anticipated impact have been funded by donors other than the EC (including EU member states). Co-ordination between donors and the EC is primary via the ENR Donor Group. In principle this should offer an effective mechanism for donors to align their interventions. In practice, some donors may prefer to use the group to remain updated on ENR donor activity generally, rather than as a proactive tool with which to guide or harmonise specific donor interventions.
- 6.35 With few exceptions, donors have increased the share of programme aid notably SWAPs, other basket funding and budget support. These modalities have facilitated harmonisation and have a strong potential to reduce donor transaction costs in the long run. Budget support and basket programme support strengthen the government ownership and changes its quality. Budget support and SWAPs are long-term commitments and have the potential to avoid the traditional go-stop-go situations. This is emphasised in the PEAP by stating that a shift from the magnitude of aid to changes in the composition of aid; its predictability and in the manner in which donor aid programmes are articulated with the government budget, is crucial.
- 6.36 In line with the PEAP priorities GoU envisages an increase in the sector shares of the budget for agriculture, roads and works, education and health. Strengthening budgeting at the sector level will be crucial to achieving the PEAP objectives. SWAPs, which have already generated important benefits for budget planning, will be extended to cover all areas of the budget. All budget submissions by line ministries and other spending agencies must be consistent with the relevant sector expenditure plan. All projects will have to satisfy a range of criteria, including affordability within the relevant sector ceiling.

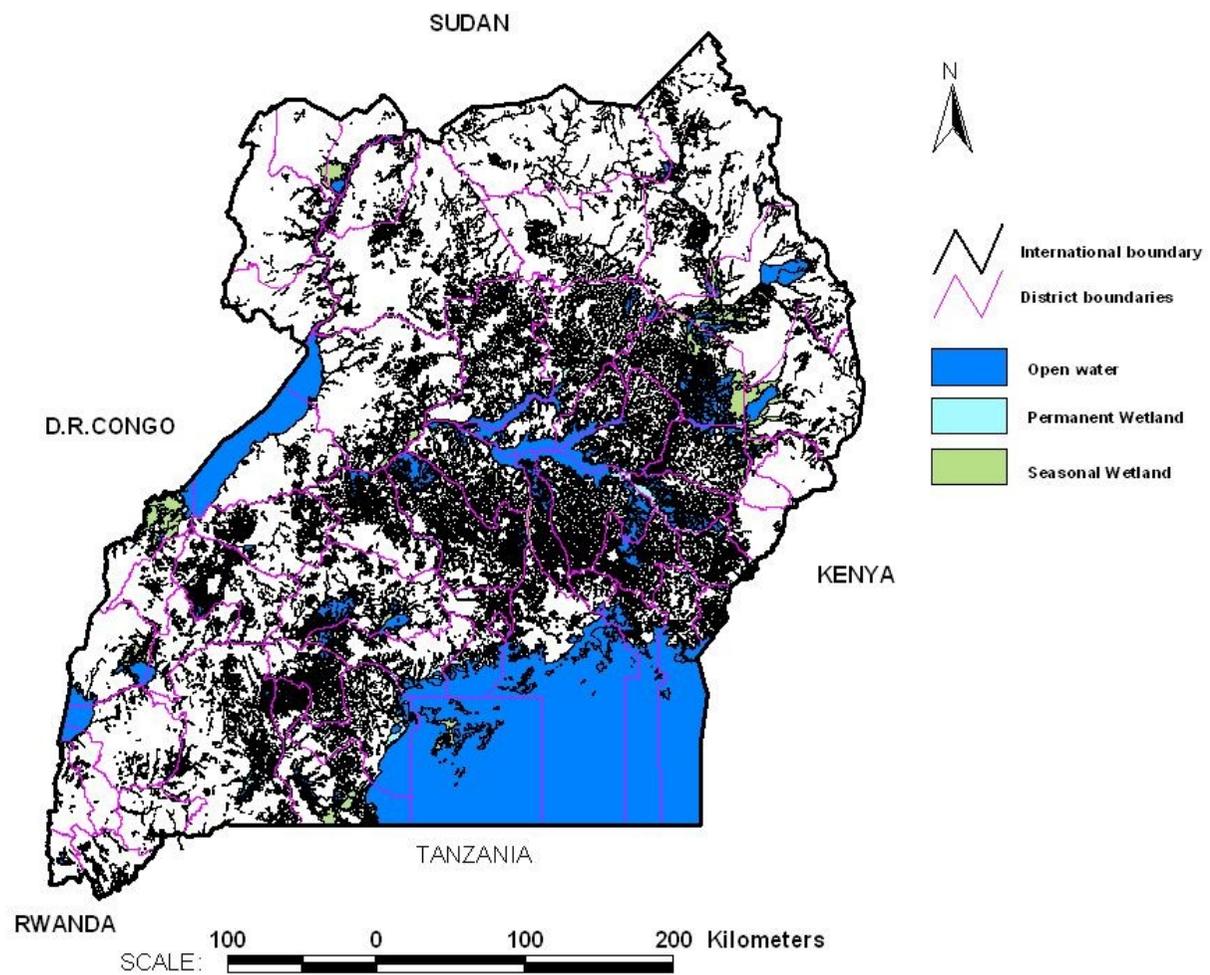
7. TECHNICAL APPENDICES

7.1 ENVIRONMENTAL MAPS

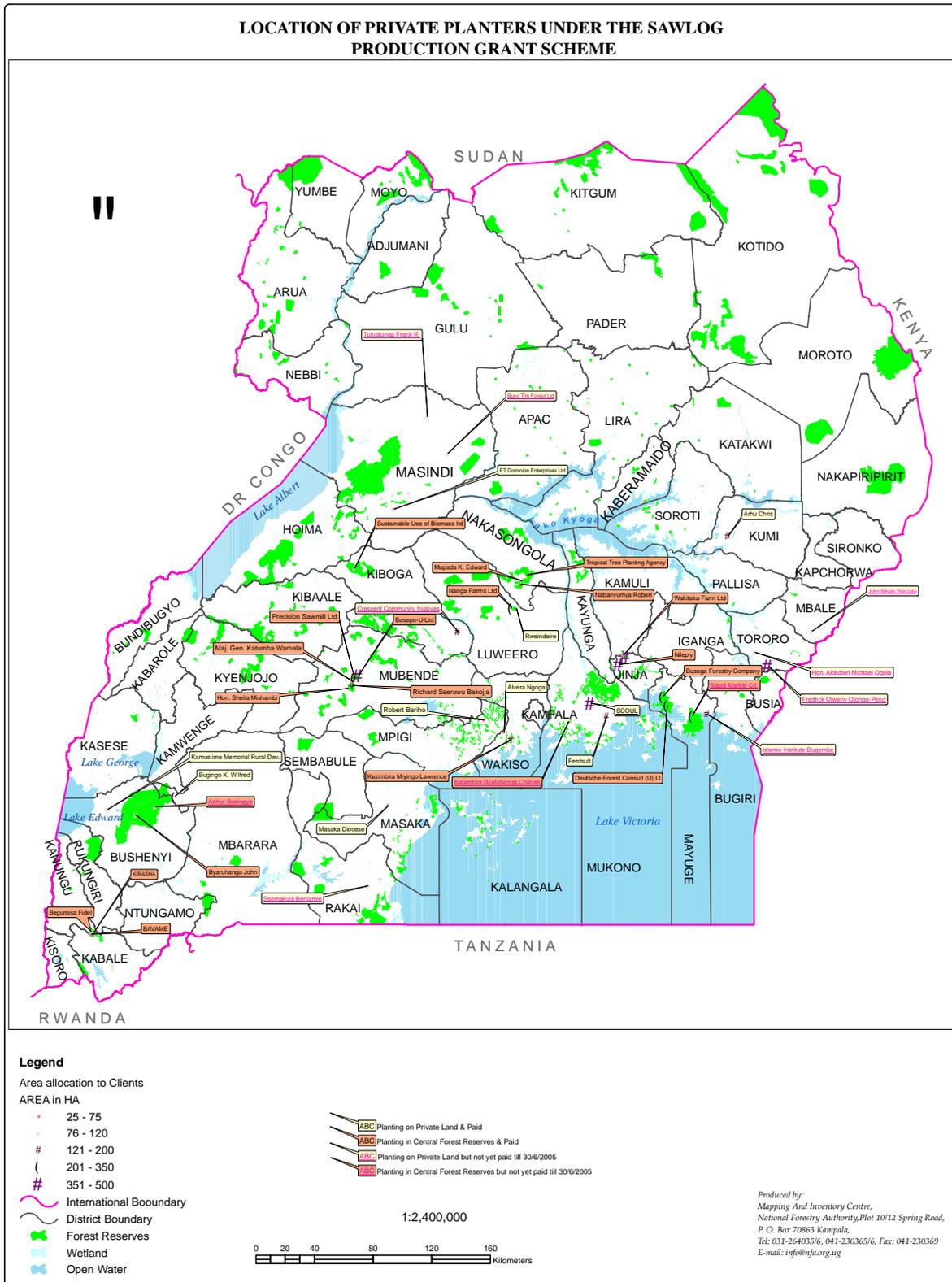
7.1.1 Uganda Physical and Administrative



7.1.2 Uganda Wetlands



7.1.3 Sawlog Plantation Locations



7.2 REFERENCE LISTS

7.2.1 List of Non-EC Donor Projects

UK & UNDP	CONSERVE BIODIV. ALBERT RIFT VALLEY
AUSTRIA, Denmark	EASTERN CENTRES WATER & SAN. PROJECT
IDA	ENERGY FOR RURAL TRANSFORMATION
GERMANY	ENTEBBE WATER & SEWERAGE EXPANSION
GoU, IDA, Sweden, UNDP	ENVIRONMENT MANAGEMENT CAPACITY BUILDING
Norway	FORESTRY SECTOR PROGRAM MANAGEMENT UNIT
GERMANY	GABA III PROJECT
BADEA	INSTITUTIONAL SUPPORT TO METEOROLOGICAL DEPARTMENT
GERMANY	KABALE WATER SUPPLY & SANITATION
CHINA	KAMPALA NETWORK REHABILITATION PROJ
GERMANY	KAMPALA SANITATION PROJECT
NETHERLANDS	KIBALE/SEMLIKI - CONSERVATION & DEVELOPMENT
GEF	LAKEVICTORIA ENVIRONMENT MANAGEMENT PROGRAMME
IDA	LAKE VICTORIA ENVIRONMENT MANAGEMENT - SECRETARIAT
Sweden	LAND TENURE REFORM PROJECT
FRANCE	MID-SOUTHERN TOWNS WATER SUPPLY
EGYPT	MITIGATION OF L.KYOGA FLOODS
Norway	NATIONAL BIOMASS STUDY - PHASE III
BELGIUM, NETHERLANDS	NATIONAL WETLAND PROJECT - PHASE 3
BADEA, UK	NORTH EASTERN TOWNS WATER & SANITATION
FAO	OPER.WATER RESOURCE MAG'T-NILE BSN
DENMARK	POLICY & MANAGEMENT SUPPORT
GEF, UNDP	REDUCTION OF BIODIVERSITY LOSS AT CROSS BORDER POINT
ADB	RURAL TOWNS WATER
AUSTRIA, DENMARK	RURAL WATER & SAN, EAST UGANDA
CANADA, JAPAN	RURAL WATER SUPPLY - CENTRAL UGANDA
UNICEF	SCHOOL/COMMUNITY SANITATION & WATER
IDA	SMALL TOWNS WATER
AUSTRIA	SOUTH/WEST TOWNS WATER & SANITATION
DENMARK, SWEDEN	SUPPORT TO RURAL WATER SECTOR
DENMARK	SUPPORT TO SMALL TOWNS WATER
DENMARK, IAEA, JAPAN	SUPPORT TO THE WRMD
AUSTRIA, NORWAY, UNDP, UNSO	TREE SEED CENTRE
UK	UG FOREST SECTOR POLICY & STRATEGY
GERMANY, IDA	URBAN WATER REFORM IMPLEMENTATION
BADEA, IDA	WATER FOR PRODUCTION
DENMARK	WATER SECTOR HUMAN RESOURCE DEVELOPMENT
GERMANY	WATER&SANITATION FOR URBAN POOR
CED, GERMANY	KFW SUPPORT TO NWSC
GEF	PREPARATION OF UNFCCC COMMUNICATION
AUSTRIA	KITGUM TOWN WATER AND SANITATION
ITALY	KARAMOJA TOWNS WATER AND SANITATION
ITALY	KAJJANSI WATER SUPPLY PROJECT
NORWAY	STRENGTHENING FOREST DEPARTMENT
NORWAY	COMBINED FORESTRY TRAINING PROJECT
NORWAY	MT ELGON CONSERVATION & DEVELOPMENT PROJECT
NORWAY	PERI-URBAN PLANTATIONS PROJECT
UNDP	INSTITUTIONAL SUPPORT TO NEMA
GEF	S.WEST/S.EAST WATERSHED MANAGEMENT
SWEDEN, UNICEF	WATER AND ENVIRON. SANITATION PROGRAMME
GERMANY	CAPACITY BUILDING IN TOWN PLANNING
GEF	STRENGTHENING OF BIODIVERSITY INSTITUTIONS
IDA	STRATEGIC TOWN PLANNING STUDIES
UNDP, UNECA	DEVELOPMENT OF BUILDING MATS IND IN AFRICA
NETHERLANDS	NATIONAL WETLANDS CONSERVATION
DENMARK	MASESE SELF HELP PROJECT
GERMANY	SMALL TOWNS WATER - KFW GRANT
UNDP	NAMUWONGO UPGRAD & LOW COST HOUSING
UNDP	REHABILITATION OF SURVEYS & MAPPING DEPARTMENT
ADF	FARM INCOME ENHANCEMENT PROJECT
UNIDO	CLEANER PRODUCTION CENTRE
USA	DEVELOPING EXPORT AGRICULTURE
ITC, UNCTAD, WTO	JITAP
IDA	PROTECTED AREAS MANGMNT & SUST. USE
UNDP	STRENGTHENING OF UNBS
GERMANY	SUPPORT TO MURCHISON FALLS NATIONAL PARK
UNIDO	UGANDA INTEGRATED PROGRAMME
USA	WILDLIFE EDUCATION CENTRE TRUST

List of Non-EC Donor Projects (continued)

CHINA	SUPPORT TO UIRI-NAKAWA
UNDP	ECOLOGICALLY SUSTAINABLE IND. DEVELOPMENT PROGRAMME
AUSTRIA	LEATHER AND LEATHER PRODUCTS INDUST
GEF, NETHERLANDS, USA	BWINDI/MGAHINGA TRUST ADMINISTRATION
USA	RWENZORI MTNS CONS & DEVT - PHASE 2
SWEDEN, USA	SUPPORT TO LAKE MBURO NAT. PARK
GEF, USA	ECO-TOURISM DEV - BWINDI & MGAHINGA
USA	ACTION PROGRAM FOR ENVIRONMENT-TRSM
AUSTRIA	NATIONAL LEATHER INDUSTRY SCHEME
CARE, CERUDET, UNCDF, UNDP	WEST NILE CREDIT PROJECT
UNDP, UNIDO	MBARARA GROWTH CENTER
UNDP	PROMOTION OF EXTERNAL TRADE
UNDP	ASSISTANCE TO EXTERNAL TRADE
CHINA	FOOD TECHNOLOGY AND CERAMICS
IDA	ASAC, INVESTMENT COMPONENT - MCCM
USA	SUPPORT TO RWENZORI MOUNTAINS NATIONAL PARK
USA	NATURAL RESOURCES & TOURISM DEVT
FRANCE	HOTEL TRAINING
NORWAY, UNDP	TOURISM REHABILITATION DEVELOPMENT PLAN
UNDP	INDICATIVE INDUSTRIAL PLAN
UNDP	STRENGTHENING UNBS
USA	DEVELOPMENT THROUGH CONSERVATION
USA	CAAS PROJECT
BADEA, EADB, EXIM BANK USA, IDB	THE SUGAR INDUSTRY (KINYARA)
KUWAIT, OPEC, PTA, SAUDI ARABIA, UDB	THE SUGAR INDUSTRY (KINYARA)
ADB	GINNERIES REHABILITATION PROJECT
GERMANY	CENTRAL STORAGE PROJECT
FAO, GERMANY	UIRI - VALUE ADDED MEAT PRODUCTS
FAO	VILLAGE MEAT PROCESSING
ADF	ALT. ENERGY RESOURCE ASSESSMENT
GERMANY	ENERGY ADVISORY PROJECT
IDA	ENERGY FOR RURAL TRANS. - MEMD
IDA	SUSTAINABLE MANAGEMENT OF MINERAL RESOURCES
CFTC, IDA	PETROLEUM EXPLORATION PROMOTION
IDA	POWER IV
ADF, FRANCE, IDA, SWEDEN	RURAL ELECTRIFICATION
IDA, NORWAY	UGANDA ELECTRICITY REGULATORY AUTHORITY
CHINA	CONSTRUCTION OF DEMONSTRATION BIOLOGICAL DIGESTERS
NETHERLANDS	SUSTAINABLE ENERGY HOUSEHOLDS & IND
IDB	PIPELINE EXTENSION FEASIBILITY STUD
IDA	EVALUATION SMALL HYDROPOWER SITES
IDA	POWER III-MIN OF NATURAL RESOURCES
SWEDEN	POWER III-MIN OF NATURAL RESOURCES
GEF, UNDP	UGANDA PHOTOVOLTAIC PILOT PROJECT
SWEDEN, USA	NATIONAL SEISMOLOGICAL NETWORK
NORWAY	POWER SECTOR REGULATORY FRAMEWORK
UNEP	ENVIRONMENTAL LAWS & INSTITUTIONS
USA	UGANDA CLIMATE CHANGE COUNTRY STUDY
UNEP	OZONE LAYER PROGRAMME
UNIDO	BIOMASS ENERGY FOR INDUSTRIAL DEVOPMENT
USA	ACTION PROGRAM FOR ENVIRONMENT -NR
GEF	GREENHOUSE GASES PROJECT
NORWAY	COMBINED FORESTRY TRAINING, NYABYEYA
IDA, USA	NATIONAL ENVIRONMENT ACTION PLAN
SWEDEN	BIOLOGICAL CONSERVATION STUDY
UNDP	URBAN LOW COST WATER SANITATION
DENMARK	NATIONAL WATER RESOURCES MASTER PLAN
UNDP	STRENGTHENING GSMD MINERAL INVESTMENT
NORWAY	NATIONAL BIOMASS STUDY
NETHERLANDS, UK, UNICEF	SPRING PROTECTION WELLS & GRAVITY SCHEME
UK, UNICEF	PUMP REPLACEMENT AND MAINTENANCE
OPEC, UNDP	GEOHERMAL ENERGY
NORWAY, USA	MT ELGON – CONSERVATION & DEVELOPMENT PHASE III
UNEP	ENVIRONMETAL PROTECTION PILOT VILAGES
UNDP	STRENGTHENING METEOROLOGICAL SERVICES
DENMARK, UNSO	NATIONAL ENVIRONMENT INFORM. CENTRE
ADF	FOUR URBAN CENTRES WATER
IDA	NATIONAL ENVIRONMENTAL MANAGEMENT AUTHORITY (NEMA)

7.2.2 Reference List (policies, statements, action plans, relevant technical information)

All documents consulted or of relevance to this report are listed under section 8.4

7.2.3 Wildlife Protected Areas under the jurisdiction of Uganda Wildlife Authority (km²)

NATIONAL PARKS

Murchison Falls	3,877
Queen Elizabeth	2,056
Kidepo Valley	1,431
Lake Mburo	370
Bwindi Impenetrable	327
Mgahinga Gorilla	38
Rwenzori Mountains	995
Mt Elgon	1,110
Kibale	789
Semuliki	220
	11,213

WILDLIFE RESERVES

Katonga	210
Kigezi	265
Kyambura	154
Karuma	675
Bugungu	473
Ajai	148
Pian Upe	401
Bokora	1,816
Matheniko	1,757
Toro-Semliki	542
East Madi	829
Kabwoya	87
	7,357

SANCTUARIES

Mt Kei	416
Otzi	186
Entebbe	106
Jinja	10
Kazinga (old)	17
Kahendero	0.72
Kashaka	0.29
Kayanja	0.28
Kazinga Village	0.33
Kisenyi	0.42
Rwenshama	0.92
Nyaburogo	5.08
Ntoroko-Kanara	2.54
	46

CWAs

Karenga CWA	956
Iriiri CWA	1,046
Amudat CWA	2,053
Rwengara CWA	76
Kaiso-Tonya	107
	4,993

7.2.4 Outcomes of the Stakeholder Workshop

A workshop was held in the EC Delegation on 19th October 2005 to discuss issues relating to the development of the CEP. A total of 20 people attended as follows:

Ann Ruhweza	NEMA
John Balirwa	FIRRI
Olive Mkumbo	LVFO
Martin Fowler	MAAIF
M G Kitutu	NEMA
J Scullion	LVFO
O Bjella	NFA
M Kasekende	EC
P Bahema	EC
C Kanyesigye	NWSC
P Semyange	EC
F Nunan	LVFO
H Pulunyi	EC
C Hermansson	EC
R Noe	EC
D Nyeko	Fisheries Commissioner
N Namakambo	WID
B Nakangu	IUCN
D Kaggwa	Environmental Alert
J Higham	EC

Following introductions, three groups were formed and asked to discuss each issue amongst themselves for a few minutes before reporting collectively back to the workshop. Results were placed on flip charts for further discussion and are reported below. In addition, invitees were asked to complete questionnaires on the same themes. Completed questionnaires were received and the results are also shown below.

What are the environmental pressures in terms of their impact on the Ugandan environment in addition to CEP ToR items?

Items in the CEP ToR

- Forests and woodlands – deforestation
- Wetlands – degradation
- Biodiversity - loss of biodiversity and introduction of alien species
- Urban areas – water and sanitation, solid waste management, proliferation of slums and unplanned settlements
- Air pollution
- Widespread poverty
- Fisheries particularly in lake Victoria
- Land tenure and degradation
- Conflict

Additional items identified by workshop

- Cross cutting issues
- Fragile systems eg river banks and lakes
- All types of fisheries not just Lake Victoria
- Village pollution
- Energy consumption
- Environmental sanitation (should be removed from ToR list)
- Health

What are the obstacles to environmental management?

- Inconsistent application of policies
- Lack of ENR integration across policy areas
- Political interference
- Lack of data
- Lack of priority funding for data management
- Lack of dissemination of information
- Poor communication / co-ordination
- ENR not prioritised
- Lack of alternative livelihoods
- Lack of enforcement at District Level
- Poverty / AIDS
- Lack of sustainable funding and use of sector wealth to develop it.
- Conflicts
- Lack of rural infrastructure

What are the opportunities for sustainable development?

- Good climate
- Good water / soils / landscape
- Social capital
- Biodiversity a source of wealth
- Strong institutional framework
- Strong investment climate
- Ramsar / UNEASCO sites
- Decentralised government (but not fully realised)
- Realising community participation
- Rainwater harvesting

What are the indicators of success?

- Poverty reduction
- Improved quality of life
- Good planning with verifiable results
- Selective forest cover in reserves every 5 years
- Species counts
- Reduced level of encroachment
- Cause of death
- Contribution of ENR household / income / GDP
- Total fish catch

What are examples of successful integration of environmental concerns into the economic sector?

- Mitigations actions not monitored
- EIAs usually implemented well, especially in transport and infrastructure sector
- EIAs often done after developments have started in industry, mining and oil exploration
- ENR reflected in PEAP but not funded
- SEA guidelines available in draft but not implemented
- Local gov programmes involve env concerns
- Uganda Brewery, Hima cement, Kasese cobalt mine Lake Albert
- Poor policy integration with respect to irrigation and drainage

Prior to the workshop potential participants were asked to rank the environmental issues identified in the ToR. The following table shows the results of ten responses and the identification of clear priority concerns.

ISSUE											Total
Forests and woodlands – deforestation	1	1	1	1	1	1	1	1	1	1	10
Wetlands – degradation	1	1	1	1	1	2	1	3	1	1	13
Biodiversity loss and introduction of alien species	2	2	2	2	2	2	2	1	1	1	17
Urban areas: water /sanitation, solid waste, slums and unplanned settlements	1	2	1	1	1	2	1	3	1	1	14
Environmental sanitation	1	2	1	1	1	2	1	3	1	3	15
Widespread poverty	1	1	1	1	1	1	1	1	1	2	11
Fisheries particularly in Lake Victoria	1	2	1	1	2	2	2	3	2	1	17
Land tenure and degradation	1	1	2	1	1	1	1	3	1	1	13
Conflict	2	2	2	1	1	1	3	2	2	1	17
Lake Victoria pollution		1									NA
Indoor air pollution						1					NA
Investment policy impact							2				NA

Overall

High (mean score 1 or <1):
 High/Medium (mean score 1 to 1.4):
 Medium (mean score 1.7)

forest degradation, poverty
 wetlands, urban, land
 biodiversity, fisheries, conflict

8. ADMINISTRATIVE APPENDICES

8.1 STUDY METHODOLOGY / WORKPLAN

ACTIVITY	OUTCOME
Briefing in Brussels	<p>Discuss requirements in detail with EC country desk officer and other Brussels based staff</p> <p>Obtain any available reference documents e.g. Country Strategy Paper and National Indicative Programme; evaluation reports <i>etc</i></p> <p>Discussion on Workshop expectations</p> <p>Discussion on proposed key sites to visit during the mission</p>
Desk analysis (UK based) Week 1	<p>Review reference documents for Uganda</p> <p>Initial contact with the National Environment Management Authority</p> <p>Web search covering the broad range of environmental issues, with emphasis on:</p> <ul style="list-style-type: none"> • Lake Victoria Environmental Management Project (GEF) • Recent environmental work on the Victoria Nile notably the Bujagali and other associated environmental investigations related to hydropower development • Environmental management in the Uganda highlands • The Forest Resources Management and Conservation Programme • Government Policy in relation to "Vision 2025" <p>Develop an initial list of key stakeholders to be visited when in Uganda</p> <p>Draft outline workshop: identification and consensus on key environmental concerns</p>
Mission Field Phase Week 2	<p>Travel to Uganda</p> <p>Briefing with EC Delegation in Uganda</p> <p>Early discussions with selection of national and local authorities, international donors, key civil society actors</p> <p>Review of relevant literature, evaluation reports, environmental policy and legislation framework, legislation and regulations and enforcement relating to environmental issues, action plans, and progress in implementation</p> <p>Establish field visit itinerary (with Delegation and key stakeholders) to 2-3 sites of key environmental concern. (distance and available time dependent)</p> <p>Agree Workshop approach and delivery, venue <i>etc</i> and invitation list: national authorities, donors, experts and civil society representatives <i>etc</i></p> <p>EC Delegation/government counterpart to handle workshop logistics (e.g. invitations to workshop; arrange venue, refreshments <i>etc</i>) and to help with organising required meetings for the Experts</p>
Week 3	<p>Meet with key stakeholders and discuss ideas for their respective roles in the workshop</p> <p>Field visits, discussions with stakeholders and receive documents</p> <p>Prepare for workshop delivery</p> <p>Host ½ day workshop</p> <p>Consolidate findings from field visits/workshop</p> <p>Review of environmental performance indicators</p> <p>Final key stakeholder discussions and reporting</p>
Draft Report	Prepare draft report
Debriefing in Brussels	Short presentation and Q & A
Draft Final Report	Receive comments and resubmit the draft final report and distribute
Final Report	Upon receipt of comments, final amendments to report and dispatch

8.2 CONSULTANTS ITINERARY

DATE (Oct 2005)	ACTIVITY
Tuesday 4	Europe Aid, Brussels – Mission Briefing
Thursday 6	Travel to Uganda
Friday 7	EC Delegation (10:00) NEMA (14:00) NFA (16:00)
Sat 8	Review relevant literature, evaluation reports, environmental policy and legislation framework, legislation and regulations and enforcement relating to environmental issues, action plans, and progress in implementation
Sun 9	
Mon 10	Belgian Embassy (10.00) ADB (12.30) NWSC (14.30) NEMA (16.00) Report review etc
Tues 11	Environmental Alert (0900) Wetlands Inspection Division (1400) MWLE (1500) UWA (1600)
Wed 12	Field Visit with NFA Kifue Central Tree Nursery, National Tree Seed Centre, Katugo Reserve
Thurs 13	Field Visit with NEMA to DEOs at Mukono and Mpigi
Fri 14	MAIF (0800) LVEMP (0900) Nile Sec (1000) Fisheries Commissioner (1100) Norwegian Embassy (1400) Kampala CC (1500) NAO (1600)
Sat 15	Report writing
Sun 16	Report writing
Mon 17	LVFO (0930) FIRRI (1000) USAID (1500) UNDP (1600)
Tues 18	MEMD (0900) Workshop preparation
Wed 19	½ day workshop and reporting
Thurs 20	Final key stakeholder discussions and reporting EC Delegation (16:00)
Fri 21	Travel to UK

8.3 LIST OF PERSONS AND ORGANISATIONS CONSULTED

NAME	ORGANISATION	FUNCTION	CONTACT DETAILS
Christer Hermansson	EC Delegation, Uganda	Head, Rural Development	+256 – 41 - 233303 ext. 14 christer.hermansson@cec-eu.int
Margaret Kasekende	EC Delegation, Uganda	Operations Officer (Environment & Forestry)	+256 - 41 - 233303 ext. 14 margaret.kasekende@cec-eu.int
Eugene Muramira	National Environment Management Authority	Director, Policy Planning & Information	+ 256 - 41 - 250210
Mary Goretti Kitutu Kimono	National Environment Management Authority	Env. Information Systems Specialist	+256 - 41 - 25021064/5/8 gkitutu@nemaug.org
Olav Bjella	National Forestry Authority	Executive Director	+ 256 – 41 - 230365/6 olavb@nfa.org.ug
Edward Mupada	Edward Mupada	Director, Corporate Affairs	+ 256 – 41 - 230365/6 edwardm@nfa.org.ug
Kathelyne Craenen	ENR Donor group (Belgian Embassy)	Co-ordinator	+256 - 41/349559-69-70 kathelyne.craenen@diplobel.org
Benedict S Kanu	African Development Bank	Country Operations Officer	+256-41-234011 b.kanu@afdb.org
Christopher Kanyesigye	National Water and Sewerage Corporation	Quality Control Manager	+256-41-257548 waterq@imul.com
Dorothy Kaggwa	Environmental Alert	Senior Programme Officer	+256-41-510547 dkaggwa@envalert.org
Paul Mafabi	Wetland Inspection Division	Assistant Commissioner	+256-41-251375 mafabip@ugandawetlands.org
Bwango Apuuli	MWLE	Ag Director Lands & Environment	+256-41-341875 bapuuli@yahoo.co.uk
Moses Wafula	UWA	Executive Director	+256-41-346291 moses.mapesa@uwa.or.ug
Martin Fowler	MAIF	Senior Policy and Programme Adviser	+256-41-321318 mfowler@utlonline.co.ug
Faustino L Orach-Meza	LVEMP	National Executive Secretary	+256-41-321459 forach@lavemp.or.ug
Hamere Wondimu	NBI	Senior programme Officer / SVP Co-ordinator	+256-41-321424 hwondimu@nilebasin.org
Dick Nyeko	MAIF	Fisheries Commissioner	+256-41-322107 sfpproject@utlonline.co.ug
Geir Hermansen	Norwegian Embassy	Second secretary / development affairs	+256-41-343621 emb.kampala@norad.no
Dan Twebaze	Kampala City Council	Project Co-ordinator	+256-41-234497 dan.twebaze@kcc.go.ug
Mr Deo Kamweya	Ministry of Finance, Planning & Economic Development	NAO Office	+256-41-707123 deo.kamweya@finance.go.ug
Paul Jacovelli	EC Forestry Programme	Chief Technical Adviser	+256-31-264035 paulj@nfa.org.ug
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James Scullion	LVFO	Project Manager IFMP	+256-43-120207 jsscullion@lvfo.org
Constantine Odongkara	FIRRI	Senior RO	+256-43-120484
Jody Stallings	USAID	NRM Advisor	+256-41-387387 stallings@usaid.gov
Justin Ecaat	UNDP	Environmental Specialist	
Philippe Simonis	GTZ	Energy Adviser	+256-41-234165 simonis@africaonline.co.ug

Copies of meeting notes are available on request

8.4 LIST OF DOCUMENTATION CONSULTED

Year	AUTHOR	TITLE
2002	NEMA	State of the Environment Report
2003	NEMA	Annual Report
2004	Environment & Development Associates, Kampala Development Consultants International, Kampala HTS Development Limited, London	Review of the Framework for Environmental Governance in Uganda
2002	NEMA	Proposal for Funding Environmental Reporting
2005	Anon	Fourth Joint Annual Review of the PMA.
	Ian	FRMCP Mid-Term Review
2005	NEMA	Status of Indicators for Monitoring Environmental Quality and trends in Uganda (Part 1)
2005	NFA	PowerPoint presentation of the Forest sector in Uganda
2005	USAID	Impact of Conflict in Northern Uganda on the Environment and Natural Resource Management
2004	Agrifor Consult	Mid-Term Review of the Forest Resources Management Programme (FRMCP).
2004	District Environment Office Gulu.	State of Environment Report
2004	District Environment Office Lira.	State of Environment Report
2005	Oxford Policy Management	Evaluation Report of the Plan for the Modernisation of Agriculture.
2001	MWLE	Wetland Sector Strategic Plan 2001-2010.
2005	MWLE	Wetlands and the Law.
2005	NEMA	Proposal for Funding Environmental Reporting in Uganda.
2005	NBI (web-based)	The Nile Transboundary Environmental Action Project
2005	SPGS	Sawlog Production Grant Scheme Newsletter no 5
2002	MEMD	The Energy Policy for Uganda
2002	NEMA	Localising Global Environmental Conventions
2002		Poverty Relevant Environmental Indicators: Status Report for Uganda – 2002
		Guidelines for Mainstreaming Environment and Natural Resource Issues into other Sector Programmes
		The Potential of ENR based Enterprises to Eradicate Poverty
		Evaluation of the contribution of Forestry/Environment Resources to Poor Peoples Incomes/Livelihood
		The Economic and Social Values of Weather and Climate Information
		The Contribution of Wetlands to Household Incomes and Livelihoods as a basis of Integration of Wetland Issues into the PEAP
		Land and Poverty Eradication
		Incorporating the United Nations Convention to Combat Desertification into the PEAP
		Fisheries Contribution to Increase in Household incomes and overall Poverty reduction
		Estimating the Economic benefits, particularly to the poor of Investments in Nature Resource and Environment Management
		Analysis of key driving forces in the environment sector
		Increasing Growth and reducing Poverty: the role of Improved environmental management in Uganda

8.5 CURRICULA VITAE OF THE CONSULTANTS

INTERNATIONAL EXPERT I/TEAM LEADER/DR RICHARD PAGETT

1. **Family name:** Pagett
2. **First names:** Richard
3. **Date of birth:** 26 February 1953
4. **Nationality:** British
5. **Civil status:** Married
6. **Education:**

Institution [Date from - Date to]	Degree(s) or Diploma(s) obtained:
University of London 1978	Ph.D. [<i>Ecology, Chemistry and Physiology</i>]
University of London 1975	BSc (Hons) Zoology, Upper Second

7. **Language skills:** Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

Language	Reading	Speaking	Writing
English	1	1	1
French	3	4	4
Russian	4	4	4
Arabic	5	4	5

8. **Membership of professional bodies:**

Institute of Environmental Assessment, *Registered Assessor*
 Chartered Institution of Water and Environmental Management, *Chartered Scientist*
 Environmental Auditors Registration Association, *Registered Environmental Auditor*
 Institute of Biology, *Chartered Biologist*
 European Professional Biologists Association, *EurProBiol*
 Institution of Environmental Sciences
 Institute of Petroleum

9. **Other skills:**

Computer Literacy: Office Suite (Word, Excel, PowerPoint, Publisher, Access, Front Page) HTML

Technical Courses: University of Bradford (1988) *Flow and Water Quality Modelling*
 WS Atkins (1993) *Internal Quality Auditing*

Det Norske Veritas (1997) *Certification of EMS*

10. **Present position:** Self-employed

11. **Years within the firm:** Freelance

12. **Key qualifications:**

- Over 20 years experience of undertaking environmental assessments, planning environmental programmes and training and development in Africa, Middle East, Asia and the Caribbean.
- Recent Uganda experience.
- Team Leader for Country Environmental Profile (for Guyana) for ACP countries in 2005.
- Significant knowledge of EC environment and development policies and with guidance on programming, country strategies, project management cycle and environmental mainstreaming.
- Specialist expertise in stakeholder participation strategies, sustainable development & poverty reduction, capacity-building and institution strengthening.

INTERNATIONAL EXPERT I/TEAM MEMBER/MR IAN MATHIESON

1. **Family name:** Mathieson
2. **First names:** Ian
3. **Date of birth:** 20 July 1953
4. **Nationality:** British
5. **Education:**

Institution [Date from - Date to]	Degree(s) or Diploma(s) obtained:
Rycotewood College Mar 1980 – Mar 1982 (intermittent)	Entry to Institute of Agricultural Engineers and Eur. Eng
Durham University Oct 1975 – Jul 1978	BA (Hons) Geography

6. **Language skills:** Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

Language	Reading	Speaking	Writing
English	1	1	1
French	5	5	5

7. **Membership of professional bodies:**

Institute of Agricultural Engineers, *Member*
 Institute of Professional Soil Scientists, *Member*

8. **Other skills:**

Computer Literacy: Competent in spreadsheet and word processing packages

9. **Present position:** Principal Consultant

10. **Years within the firm:** 23

11. **Key qualifications:**

- Over 20 years experience in environment and natural resource evaluation and management
- Has undertaken major environmental impact assessments in Uganda and other East African experience in the context of development programmes
- Has been working on EC projects since 1991 with experience of all stages of the project cycle
- Extensive and detailed knowledge of participatory planning processes and procedures
- Proven ability of delivering project reports and appraisal reports to a high standard

8.6 TERMS OF REFERENCE OF THE COUNTRY ENVIRONMENTAL PROFILE

1. Background

Uganda is a landlocked country and is located in the eastern region of Africa, bordered by the Republic of Kenya in the east, Tanzania and Rwanda in the south, the Democratic Republic of Congo in the west and Sudan in the north. Uganda covers an area of about 241,500 sq. km. The natural resources of Uganda include the air, water, climate, plants and animals. Environmental issues in Uganda are addressed within a sustainable development framework that promotes social, economic and environmental well-being through the decentralised and participatory environmental mode of management. The Delegation of the European Commission in the Republic of Uganda is in the process of developing a Country Strategy Paper (CSP) as the current one comes to an end in 2007. It is for this reason that a comprehensive Country Environmental Profile (CEP) is required in order to provide information on the environmental conditions of Uganda, national environmental policy, regulatory reforms and institutional frameworks. It will also provide the decision makers in the Commission and the Government of Uganda with sufficient information to identify EC cooperation activities with specific environmental objectives and establish environmental safeguards for other activities.

2. Objective

The main objective of a Country Environmental Profile is to identify and assess environmental issues to be considered during the preparation of a Country Strategy Paper, which will directly or indirectly influence EC cooperation activities.

The Country Environmental Profile will provide decision-makers in the partner country and in the European Commission with clear information on the key environmental challenges, as well as policies, strategies and programmes designed to address them. This information will ensure that the EC cooperation strategies systematically integrate environmental considerations into the selection of priority focal areas and also establish the necessary environment safeguards for all cooperation activities undertaken in the Country.

The Profile will establish the key linkages between the environment and poverty reduction. It will constitute an important source of baseline information and contribute to focusing political dialogue and cooperation with the Country on key areas of concern such as sustainable development as well as raising awareness among policy-makers.

3. Results

The assessment will deliver the following results:

An assessment of the environment identifying key environmental factors influencing the Country's development and the responses to these.

An assessment of national environmental policy and legislation; institutional structures and capacity, and the involvement of civil society in environmental issues.

An assessment of past and anticipated future trends of environmental indicators.

An overview of past and ongoing international cooperation in the environment sector.

Recommendations and, as far as possible, guidelines or criteria for mainstreaming environmental concerns in priority development areas and in the Poverty Eradication Action Plan (PEAP). These recommendations should support the preparation of the Country Strategy Paper and, as far as possible, include guidelines or criteria to be used for environmental mainstreaming in subsequent phases of the operation cycle.

Recommendations for mainstreaming environmental issues in district development plans (strengthening decentralization process)

4. Issues to be assessed

The consultants will assess the following issues:

4.1. The state of the environment

This chapter should identify key issues, including facts (pressures, current status and trends) and problems in the following areas:

Physical environment: air and climate, land, water, and natural disaster risks.

Biological environment : biodiversity, ecosystems, biological resources of cultural, social, or economic importance.

The social and economical causes of the environmental situation and trends and their consequences on human well-being and sustainable development should be presented too.

Specific issues to be addressed include:

- Forests and woodlands – deforestation
- Wetlands – degradation
- Biodiversity: Loss of biodiversity and introduction of alien species
- Urban areas – Water and sanitation, solid waste management, proliferation of slums and unplanned settlements
- Atmosphere – Climate change, climate variability, urban air pollution
- Analyse the Poverty Eradication Action Plan (PEAP) to see if it better integrates the environment objective of sustainable development with the economic and social ones.
- Land tenure and degradation

Reference should be made to local and internationally recognised environmental indicators and quality standards to establish a consistent basis for comparison of environmental and sustainable development performance. The indicators selected should facilitate future monitoring and evaluation of the extent of environmental integration and be useful for future environmental assessments. Establish a baseline for future monitoring and the frequency of monitoring of the environment situation in Uganda. The sources of collection of data should be stated. Attention should be paid to the rate of change of indicators where information is available.

If appropriate, the information could be organized according to eco-geographical subdivisions with the scale (regional, national, local) of the issues indicated.

4.2. Environmental policy and legislation

A brief description and a review of strengths and weaknesses of the following:

National policies, environmental strategies and action plans (including, if possible according to the results of 4.1, an assessment of the environmental performance in meeting the objectives and targets).

Legislation, current and in preparation, by the National Institutions covering development control, requirements for environmental assessments, sustainable use or conservation of natural resources, pollution control, land tenure and land reform. The effectiveness of legislation enforcement. The provision for public participation in environmental issues, procedures for public participation in development control and environmental planning and public access to environmental information.

National approaches to key international or regional environmental conventions such as those concerning climate change, biodiversity and desertification.

4.3. Environmental institutional framework

A brief description and a review of strengths and weaknesses of the following:

The Institutional structures and responsibilities of the authorities dealing with environmental issues in policy making, legislation, planning, environmental protection, monitoring and enforcement.

The level of co-ordination between sectoral institutions or ministries involved in environmental or natural resources management issues.

The major NGOs, institutes or other institutional stakeholders.

The capacity and financial resources of authorities responsible for environmental management.

The extent and quality of protected areas (and, if relevant, other land use measures).

4.4. Integration of environmental concerns into the main sectors

The assessment should examine the integration of environmental concerns in the main sectors that have key linkages with environmental issues and might be identified for EC support : The proposed focal sectors for 10th EDF are Transport and the Plan for Modernisation of Agriculture (PMA)

Support to PMA includes the following:

Agricultural research, Agriculture extension services and Natural resource management.

The National resource management covers the following:

Support sustainable wetlands resources management,

Support the establishment of forests for carbon credit,

Improvement on the private sector and community involvement in tree planting by giving more support to the Sawlog Production Grant Scheme

Environment mainstreaming in the transport sector (mainly roads but there could also be **a possibility of rail and** air transport **and** environmental issues concerning lake transport).

4.5. EC cooperation with the Country from an environmental perspective

This should cover experience relating to interventions with specific environmental objectives as well as the integration of environment into other sectors, including the application of environmental assessment procedures. Where information is available the environmental impacts of EC cooperation or potential risks should be identified for the benefit of future programmes. The results of existing evaluations/reviews should be incorporated and lessons should be drawn for the future.

4.6. Cooperation funded by other agencies from an environmental perspective

This should cover involvement of other funding agencies, their ways of funding the Environment and Natural Resources sector and their experience in the Country and include a list of recent and planned projects/programmes, with an environmental focus or anticipated impact.

5. Conclusions and recommendations

The key aspects of the state and trends of the environment in the Country including policy and institutional constraints and challenges should be clearly stated. This may be presented in a matrix, crossing environmental concerns and the main sectors or policies.

Based on a comprehensive assessment of available information and consultation with stakeholders recommendations on how best to address environmental issues should be elaborated. Individual recommendations should be clearly articulated and linked to the problems to be solved and grouped according to the involved sector or institutional stakeholder. Recommendations should be easily used in the preparation of the Country Strategy Paper, taking into account the existing Country Strategy Papers (which will provide general guidance on the style and detail required) and already pre-identified options for the next CSP. Nevertheless, useful recommendations can also be made for the Government, other donors (particularly EU Member States) and the use of EC horizontal budget lines.

The relative priority of the recommendations and an indication of the challenges to their implementation should be given.

Recommendations are likely to cover direct environmental interventions as well as the provision of environmental safeguards for other activities.

Recommendations should also be made as to how best the Commission and the Government can mainstream environmental issues into the next cycle of country strategy papers. Guidance should be given regarding Strategic Environmental Assessment in major sectors and performance indicators if budgetary supports are foreseen.

The constraints to preparing the profile caused by limited information should be described, and an evaluation of the need for additional studies, such as Strategic Environment Assessments or others, should be made.

6. Work plan

The work plan should include but not necessarily be limited to the following activities:

Consultation with EC country desk officers and other relevant officials, EC Delegation in the Uganda, a selection of national and local authorities, key international funding agencies operating in Uganda, plus key national, international civil society actors operating in the environmental field.

Review of previous Country Environmental Profiles and Country Strategy Papers; evaluation reports with respect to environmental issues on development and economic co-operation produced by government, EC or other agency sources.

Review of environmental literature, evaluation reports, environmental policy and legislation framework, legislation and regulations and enforcement relating to environmental issues, action plans, progress in implementation, and the progress of the ongoing study of the SWAP.

Review of environmental performance indicators selecting appropriate indicators from those suggested by organisations such as EEA/OECD/Eurostat, Uganda Bureau of Statistics (UBOS), National Environmental Management Authority (NEMA)

Field visits to sites of key environmental concern and the organisation of a national workshop that national authorities, donors, experts and civil society representatives should be invited with the aim of identifying and attempting to obtain a consensus on key environmental concerns. .

On the basis of the proposed work plan and time schedule outlined in these Terms of Reference, the consultants should provide a detailed work plan in their offer.

7. Expertise required

The proposed mission shall be conducted by a team of two experts who should have the following profile:

Expert level I or level II with at least 10 years wide experience in environmental issues, including institutional aspects; international environmental policies and management; environmental assessment techniques and experience in rapidly assembling, assessing information and developing recommendations. He/she would be the team leader

Expert level II with 10 years experience with an environment background complementary to the team leader.

In addition:

- Previous working experience in Uganda or the East African region is requested for at least one team member;
- Experts should have an understanding of the EC environment and development policies;
- Experience in undertaking environmental analysis and preparation of development programmes would be an asset;
- Familiarity with Commission guidance on programming, country strategies, PCM, policy mix and integration of environmental issues into other policy areas is desirable; and,
- Experience of participatory planning processes would be an advantage.

The experts should have proven track record of delivering high quality consultancy reports on time.

The draft and final reports must be presented in English.

For each specialist proposed, curriculum vitae must be provided of no more than four pages setting out the relevant qualifications and experience.

8. Reporting

The study conclusions must be presented in the Country Environmental Profile report in the format given in Appendix 1.

The draft report in (10) copies is to be presented to the Head of Delegation, Delegation of the European Commission in the Republic of Uganda by 28 October 2005 at the latest. Within (5) weeks, comments on the draft report will be received from the EC.

The consultants will take account of these comments in preparing the final report (maximum 40 pages excluding appendices). The final report in English in (50) copies is to be submitted by the end of November 2005.

9. Presentation of the offer

The consulting firms should present their offer by providing the two CVs of the experts (not more than 4 pages each), and the proposed methodology (not more than 4 pages).

10. Time schedule (example)

	Expert I	Expert II
Desk analysis. Including one day briefing by one expert in Brussels	5	2
Field phase including travel and possible workshop 15 15	15	15
Report finalisation	3	2
Debriefing in Brussels	1	
Final report end November 2005	1	1
Total days	25	20

11. Appendices

I. Report format for a Country Environmental Profile

Standard Report Format

Report Format for a Country Environmental Profile

Maximum length (excluding appendices) 40 pages.

The following text appears on the inside front cover of the report:

This report is financed by the European Commission and is presented by [name of consultant] for the ... (National Institution) and the European Commission. It does not necessarily reflect the opinion of the ... or the European Commission.

1. Summary

This is an executive summary of the key chapters of the Country Environmental Profile clearly indicating priority challenges and areas for action at the country level.

2. State of the environment

This chapter will also set out an assessment of the state and trends of the environment as outlined in Section 4.1 of the TOR.

3. Environmental policy, legislative and institutional framework

This chapter will provide an assessment of the Country's environmental policy, regulatory and institutional framework for pollution control, natural resource use and sustainable development. It will be divided into sections as follows:

3.1. Environmental policy and legislation

This chapter must include an assessment of the key issues outlined in Section 4.2 of the TOR.

3.2. Environmental institutional framework

This chapter should review the roles and capabilities of the main national institutions as outlined in Section 4.3 of the TOR.

3.3. Integration of environmental concerns into the main sectors

This section must include an assessment of the key issues as outlined in Section 4.4 of the TOR.

4. EC and other donor cooperation with the Country from an environmental perspective

This section must include EC and other donor assistance within the Country from an environmental perspective covering the issues outlined in Sections 4.5 and 4.6 of the TOR.

5. Conclusions and recommendations

This chapter will present the conclusions on the state and trends of the environment in the Country, including a summary of the key environmental issues in a table form. Recommendations will be made for major stakeholders (including the Government, the Commission and other donors) with a particular emphasis on how best the Commission can mainstream environmental issues into the new country strategy paper.

6. Technical appendices

I. Environmental maps of the Country

II. Reference list of environmental policy documents, statements and action plans, and other relevant technical information.

7. Administrative appendices

I. Study methodology/work plan (1–2 pages)

II. Consultants' Itinerary (1–2 pages)

III. List of persons/organisations consulted with their affiliation and contact details (1–2 pages)

IV. List of documentation consulted (1–2 pages)

V. Curricula vitae of the consultants (1 page per person)

VI. Terms of Reference for the Country Environmental Profile