



Review of the Embassy's Development
Assistance Portfolio:
Environment and Climate Change
“Greening and Climate Proofing
of the Portfolio”

The Royal Norwegian Embassy,
Kampala, Uganda

FINAL REPORT

**The Royal Norwegian Embassy,
Kampala, Uganda**

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Assistance Portfolio:**

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By

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5. January 2009



PREAMBLE

The Royal Norwegian Embassy in Kampala (the Embassy) has requested the assistance from Norad to undertake a Review of the Embassy's portfolio to identify possible ways and means of addressing/integrating appropriate climate change and environmental concerns in existing bilateral programs and projects supported by Norway. The Review was commissioned in response to the increased priority given to environment and climate change in Norwegian development cooperation policy. This Review is intended to contribute to "climate proofing" and a "greening" of the Embassy's portfolio.

The rationale for Norwegian development cooperation with Uganda is to support Uganda's own effort to reduce poverty, as well as to contribute to the peaceful resolution of internal conflicts in the country. The Embassy has a clear focus on the following priority areas: Energy, Environment and Natural Resources/Climate, Governance/Budget Support, Gender and Peace/Reconciliation.

The Review has been undertaken through desk studies, discussions with representatives of the Embassy and from implementing institutions in Uganda in the period 11 – 15 October 2008 and discussions with Norad staff members who are actively supporting the Embassy. The Review Team appreciates the fruitful and open discussions with the Embassy and institutions in Uganda.

The Team submitted the draft report to the Embassy 22. October 2008 and received comments from the Embassy 19. December 2008. Based on due considerations of the received comments the Team has prepared the final report. The final report does not reflect steps taken by the Embassy to implement the various recommendations provided in the report.

The Review Team has provided its' independent recommendations and this does not indicate any commitment on behalf of the Embassy to provide additional funding.

The Review Team comprised of Hans Olav Ibrekk and Jan Erik Studsrød.

05. January 2009

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List of Abbreviations

AD	Appropriation Document
CDM	Clean Development Mechanism
CFR	Central Forest Reserve
CER	Certified Emission Reduction
CSR	Corporate Social Responsibility
DoM	Department of Meteorology
DNA	Designated National Authority
DWD	Department of Water Development
EAC	East African Community
EIA	Environmental Impact Assessment
EMP	Environmental management plans
FAO	United Nations Food and Agricultural Organization
FCPF	Forest Carbon Partnership Facility
FFS	Farmers Field Schools
GCM	Global Circulation Models
GDP	Gross Domestic Product
GHGs	Greenhouse gases
GIS	Geographical information system
GMO	Genetically modified organism
GoU	Government of Uganda
IFC	International Finance Corporation
IPCC	Inter-Governmental Panel of Climate Change
IUCN	World Conservation Union
MDG	Millennium Development Goal
MEMD	Ministry of Energy and Mineral Development
MERECOP	Mount Elgon Regional Ecosystem Conservation Program
MFA	Norwegian Ministry of Foreign Affairs
MFPED	Ministry of Finance, Planning and Economic Development
MTR	Mid-Term Review
MWE	Ministry of Water and Environment
NAPA	National Adaptation Programme of Action
NDP	National Development Plan
NEMA	National Environment Management Authority
NFA	National Forest Authority
NGO	Non-Governmental Organization
NPD	Norwegian Petroleum Directorate
NRM	Natural Resources Management
NAPA	National Adaptation Programme of Action
NFA	National Forestry Authority
Norad	Norwegian Agency for Development Cooperation
ODA	Overseas Development Assistance
OfD	Oil for Development
PD	Project document
PEAP	Poverty Eradication Action Plan
PEI	Poverty Environment Initiative
PEPD	Petroleum Exploration and Production Department
PES	Payment for ecosystem services
RAP	Resettlement Action Plan
PRSP	Poverty Reduction Strategy Paper
REDD	Reducing deforestation and forest degradation
SEA	Strategic Environmental Assessment
SIU	Norwegian Centre for International Cooperation in Higher Education
TF ESSD	Trust Fund for Environmentally and Socially Sustainable Development

TOR	Terms of Reference
UMB	University of Life Sciences
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention for Climate Change

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

The Royal Norwegian Embassy in Kampala (the Embassy) has requested Norad to undertake a review of the Embassy's portfolio to identify ways and means of addressing and integrating climate change and environmental concerns in the current agreements within present framework and budgets, and for possible future phases of the various programs and project. This review contributes to "climate proofing" and a "greening" of the Embassy's portfolio.

The review has included programs and projects primarily within the following sectors: energy, budget support, environment and natural resources, and education. For each of the reviewed activities recommendations on how to strengthen the environmental dimension (e.g. "greening") and how to address climate change (e.g. "climate proofing") have been provided.

The overall conclusion is that there is potential to intervene to adapt to climate variability and change in the Norwegian supported programs in Uganda. Most of the activities required to respond to climate change are consistent with good development practice, i.e. "no-regrets" actions. Due to uncertainties about climate changes, it is recommended to emphasize efforts that make natural systems and society more resilient to changes. It is recommended to improve the knowledge about actual and expected climate changes at national and local level, their likely impacts and appropriate adaptation efforts. The support through the Makerere University could potentially play a key role in developing the long-term capacity needed. Potential problems in particularly vulnerable areas and communities should be addressed, and ongoing work in areas such as natural resources management should be strengthened. Furthermore, it should be ensured that climate change is addressed in the national planning process and in the relevant sectors.

In general there seems to be low awareness of climate change in Uganda, moderate technical knowledge in the institutions, and a need for the establishment of better overview and coordination about national climate change issues, as a basis for policy actions that will reduce climate vulnerabilities, recognizing current uncertainties.

The support to the **energy, including petroleum** sector are mitigation related. The Embassy could in its dialogue with the Ministry of Energy and Mineral Development (MEMD) focus on how to enhance the environmental performance of energy supply and consumption and framing energy, including petroleum sector planning, in a climate change framework. Adequate, timely measures can reduce the present climate change, environmental and health hazards related to petroleum development and energy supply and use. This could preferably be done through the use of strategic planning tools, e.g. Strategic Environmental Assessments (SEA), taking due consideration of the capacity constraints.

Potential support from the Norwegian Oil for Development (OfD) to address climate change issues within the petroleum sector in Uganda should be assessed with a basis on the recommendations of the OfD Working Group on Climate Change. There are a number of environment related issues that should be considered within the framework of the OfD-support in Uganda. This should be based on the oil and gas policy. Norway should also consider providing support to civil society organizations that have the ability to raise awareness and influence national decision-making processes and to ensure that the petroleum sector adheres to international best practice. Supporting media and organizations working with transparency and revenue management to ensure a more well-informed debate in Uganda on how the petroleum resources should be utilized could also be considered. This could also include training and sensitizing of parliamentarians.

Norway is supporting several programs within the **environment and natural resources** sector. These projects, albeit with no specific climate change objectives, contribute to strengthening resilience of local communities, protecting biodiversity, promoting sustainable use of natural resources and reducing vulnerability to natural disasters. Casting the redesigning of these projects in a climate change and climate variability perspective yields opportunities for adaptation and mitigation of climate change. Reduced deforestation and forest degradation (REDD) may play a significant role in climate change mitigation and adaptation, can yield significant sustainable development benefits, and may generate a new financing stream for sustainable forest management in developing countries. Uganda will receive support from the World Bank's Forest Carbon Partnership Facility (FCPF) to develop a national REDD strategy. Through the support to the National Forest Authority (NFA) the Embassy is well positioned to follow the REDD work in Uganda.

The Government of Uganda has taken a number of steps to develop the required framework to address natural disasters and climate change. As part of the dialogue with Uganda and other donors the Embassy could focus on:

- **Current climatic variability needs to be addressed.** The failure to effectively address increasingly severe weather patterns and climate variability in strategies and programs is a major threat to economic development and poverty alleviation. Floods and droughts already cause severe consequences in parts of Uganda. The reduction of vulnerability to current climatic hazards and the prevention of recurrent disasters are the cornerstone for building future resilience; and
- **The cost of environmental degradation.** The macro-economic impacts of the deterioration of the environment and associated losses have been estimated to amount to 4-12 % of GDP (up to 17% of GNI stated in the PEAP).

Environment, natural disasters and climate change should be a topic on the agenda for dialogue meetings with partners. Adapting to the current climatic variability and natural disasters should be a point of departure for this dialogue. Strengthening local communities' ability to respond to seasonal and event-based climate variability is likely to have payoffs in terms of longer term adaptation to climate change. The Embassy is well-positioned to take on a more proactive role in the development of the energy sector in a more environmentally and socially manner. Finally, the Embassy is well positioned to act as a facilitator/broker between key sectors of great importance for Uganda's future development, i.e. energy, petroleum, environment and forestry.

Final Observations. Finally, the Team offers some observations primarily on the potential role of the Embassy:

- The Embassy should carefully review the recommendations provided in this report and prepare a follow-up plan as part of the annual business planning;
- The Embassy should more clearly document the environmental and climate change related issues in projects and programs supported by the Embassy and encourage their partners to do the same. There is also a need to clearly document to what extent environmental assessments have been undertaken (EIA) and how these are followed up;
- Cost of environmental degradation, natural disasters and climate change should be a topic for discussions around budget and sector support; however, the dialogue should not be over-burdened. Adapting to the current climatic variability should be a point of departure for this dialogue; and
- The Embassy should consider assess its own carbon and environmental footprints and consider taking actions to reduce emissions (buildings and transport), minimize waste, improve energy efficiency, phasing out of generators, etc.

1. MAINSTREAMING OF ENVIRONMENT AND CLIMATE PROOFING – APPROACH AND METHODOLOGY

1.1 Introduction

The Norwegian Action Plan for Environment in Development Cooperation was presented in June 2006. The Government's aim is for Norway to play a leading role in making environmental concerns an integral part of all development cooperation. The ultimate goal of Norway's efforts is for developing countries to acquire the capacity and competence necessary to safeguard their right to a clean environment and the ability to manage their natural resources in a sustainable manner. The action plan sets the direction for Norway's efforts for the next ten years.

All Norwegian Embassies are requested to increase their efforts on addressing climate change. Reporting on national developments will be an important task, as well as assessing continuously how Norway can assist in achieving set climate change targets and objectives. The role each partner country can play in climate change negotiations and providing support to activities that can move partner countries towards accepting long-term commitments will be of key importance.

The Ministry of Foreign Affairs (MFA) has instructed all Embassies to increase efforts to ensure mainstreaming of environment, climate change and gender and measures to combat corruption. Increased reporting on these issues is expected. Furthermore, impacts of climate change and 'climate proofing' should constitute an element of the overall policy dialogue with partner countries, including in the dialogue with multilateral organizations and non-governmental organizations (NGOs).

1.2 Environmental Mainstreaming in the Context of the Embassy's Portfolio

Addressing/integrating environment implies 'mainstreaming' of environment in the Embassy's portfolio. **Environmental mainstreaming** refers to the integration of environmental policy considerations into core institutional thinking. Mainstreaming can help align policies, programs and operations with the long-term requirements of sustainable development, help modernize development policy content and procedures, and promote a pro-active approach rather than responding to impacts as they unfold. Mainstreaming covers both assessing scope for benefiting from environmental opportunities and avoiding negative impacts on the environment.

For the Embassy the integration of environment during programming serves two objectives:

1. To identify and avoid harmful direct and indirect environmental impacts of cooperation programs in the different sectors which can undermine sustainability and counteract achieving the development co-operation objectives of the program – "**do no harm**"; and
2. To recognize and realize opportunities for enhancing environmental conditions, thereby bringing additional benefits to development and economic activities and advancing environmental issues – "**do good**".

Combined this will contribute to a "**greening**" of the Embassy's portfolio.

In the Norwegian-supported development efforts the Embassy should actively promote "**do good**", in addition to "**do no harm**". This will be an effective contribution to Norway's com-

mitment to ensure that people and the environment are not harmed as a result of its financing, reduces and manages risk - saves money and time, improves performance and ultimately reduces risks to the Embassy's reputation.

1.3 Climate Proofing

To address climate change, the design criteria must be based on probable future climate scenarios and expected impacts. Screening for climate risks represents a first step towards “**climate-proofing**” of development programs. The screening will help to identify not only programs at risk of climate change but also those that are not climate sensitive and do not, therefore, require further risk analysis.

The following questions will be considered as a starting point:

- How does current climate variability affect the program area? What are the impacts of this variability (floods, droughts)? What are the existing coping strategies used to deal with these impacts?
- What is the country's vulnerability and risks from climate change and extreme weather?; and
- What are the anticipated impacts of climate change in the program area?

Based on the questions above development programs will be classified into three categories:

- **Category 1 - High risk** – Full climate risk assessment required
 - Sensitive sectors: agriculture, water resources, energy, coastal development and management and other infrastructure (e.g. roads).
 - Development programs in high risk areas, e.g. coastal, river bank, dry land areas.
- **Category 2 – Partial or moderate risk** – Selective climate risk assessment required:
 - Development programs with strong components related to water and in risk areas (e.g. integrated rural development, agriculture, fisheries, water supply and sanitation).
- **Category 3 - Low/no risk** – No assessment required.
 - Includes development programs that are not affected in any significant way by climate, and not affecting external vulnerabilities, e.g. within health, education.
 - It should, however, be noted that these sector can be affected by indirect impacts of climate change (socio-economic change, migration, reduced food production, vector-borne diseases etc.) and can be used to enhance capacity and raise awareness on climate change.

The approach to the Review is clearly set out in the terms of reference (TOR), see Annex I.

1.4 Policy Context – Uganda

Environmental Management

The National Environmental Management Agency (NEMA) has the overall responsibility for environmental management. Responsibility for environmental management has been formally devolved to district and lower governments, however, capacity is scarce. A number of environmental policies have been put in place: for forests (2001); wetlands (2001); and soil (2003). Environmental training and manuals have been given to relevant government agencies, NGOs, and district and sub-district officials.

NEMA is also participating in a number of climate activities. They have a general coordinating role in terms of getting different government agencies to take the environment into consideration, and a major activity has been to mainstream Environmental Impacts Assessments (EIA), which in for example the road sector has led to the development of an EIA manual. NEMA has participated in the United Nations Framework Convention on Climate Change (UNFCCC) related work with Department of Meteorology (DoM), and has played a major role in the NAPA (National Adaptation Programme of Action) preparation.

Uganda has ratified most of the major international environmental conventions; however, implementation of the various conventions seems to be a challenge.

Climate Change and Uganda

Uganda is a small contributor to climate change. CO₂-emissions per capita and per unit of GDP are considerably smaller than other Sub-Saharan countries, see Annex III. A number of climate change vulnerability scenarios have been conducted for Uganda based on Global Circulation Models (GCM) for a benchmark of doubling of the CO₂ concentration. Despite some regional variance, the three GCMs that were used, agreed that temperatures would increase between 2 and 4 degrees. Differently, one model expected an overall rainfall decrease, while the two others expected rainfall increase. It should be noticed however, that CO₂ doubling is a relatively low concentration level, which more or less will be achieved within the next two to three decades as a continuation of global greenhouse gas (GHG) emissions trends, so larger temperature changes could be expected over the next centuries. It should however be noted that the impacts of future climate change in Uganda is uncertain and there is a need to strengthen the monitoring and modeling capacity.

Overall, it is expected that Uganda will be most affected by droughts followed by storms and landslides, which are confined to highland ecosystems. Droughts are increasing in frequency and severity, particularly in the semi-arid areas (Cattle Corridor), for example seven droughts were experienced between 1991 and 2000. The anticipated headline impacts of climate change are likely to be:

- Increased food insecurity;
- Shifts in areas affected and increased incidence in some areas of diseases, such as dengue fever, malaria and water borne diseases associated with floods;
- Elevated rates for erosion and land degradation because of increased rainfall and higher intensity events;
- Greater risks of flood damage to infrastructure, property and settlements;
- Shifts in the viable area for coffee cultivation;
- Reduced output of maize crops; and
- Biodiversity loss and implications for Lake Victoria levels and Nile flows.

Climate variability and its impacts have led communities to develop coping strategies. However, frequency of events such as droughts, floods and storms was previously low and therefore coping mechanisms were not documented, developed nor popularized. Coping strategies have been passed from generation to generation through traditional and cultural practices. This practice is no longer practicable because of increased frequency and coverage areas. Hence, there is a great demand for better weather and climate information. There is a need to create awareness among stakeholders about the importance of the use of indigenous knowledge in natural resource management. This would enhance the ability of communities to cope with effects of climate change.

Uganda's Response to Climate Change Risks

Climate, perhaps Uganda's most valuable natural resource, is at the same time the most neglected. The climate of Uganda is not merely a natural resource, but a key determinant of

the status of other natural resources, which should be harnessed and effectively utilized for socioeconomic development. Climate change related events already contributes greatly to conflicts in Uganda. For example, the frequent scarcity of pasture and water resulting from droughts is a major cause of intra- and inter-district as well as inter-regional conflicts.

Uganda's contribution to global warming in terms of fossil fuel consumption is low. The energy sector is heavily dependent on bio-mass resources, accounting for more than 90 per cent of the national energy needs. Land degradation and deforestation are increasing sources of emissions of GHGs. According to figures from the National Biomass Study (unpublished 2008), Uganda lost an average of 100,000 hectares of forest per year over 15 years (i.e. between 1990 and 2005). This is equivalent to 3,700,000 tons of carbon which translates to 13,500,000 tCO₂ equivalents.

Uganda signed the UNFCCC in 1992 and ratified it in September 1993. The Kyoto protocol was ratified in March 2002. The DoM under the Ministry of Water and Environment (MWE) is the focal point for the UNFCCC and the DNA (Designated National Authority for the Clean Development Mechanism (CDM)). DoM has just completed the Ugandan NAPA¹. The first National Communication to the UNFCCC was completed in 2002, and the preparation of the second is in its initial phase.

DoM has over several years been responsible for the UNFCCC negotiations, and for coordinating national communications to the UNFCCC as well as for the NAPA.

Only one project has been established under the CDM in Uganda, the West Nile Nyagak Mini Hydropower project, which attracted about \$4 million. Other projects are under development such as the Kakira Cogeneration project and landfill gas recovery initiatives under development with nine municipalities (with World Bank support). There are also several smaller reforestation projects in the pipeline supported by the National Forest Authority (NFA). The potential for Uganda to benefit from CDM is considered to be significant². More than thirty sites have been identified suitable for mini-hydro investments and there are parcels of land available for afforestation. Tapping the potential will require donor support. In addition, there are several projects tapping into the voluntary carbon market in Uganda which offers promising possibilities to raise financing from the private sector.

¹ GEF, UNEP 2007: Climate Change. Uganda National Adaptation Programmes of Action.

² LTS International, July 2008. Climate change in Uganda: Understanding the implications and appraising the response. Scoping mission for DFID Uganda.

2. ASSESSMENT OF THE EMBASSY'S PORTFOLIO

2.1 Introduction

The Embassy identified the following programs and projects to be reviewed, as presented in the Table below:

PTA number and name	Agreement and implementing partner
UGA 3088 - UGA 08/008 Management of the Upstream Petroleum Sector	Ministry of Finance, Planning and Economic Development (MFPED) Ministry of Energy and Mineral Development (MEMD) Ministry of Water and Environment (MWE)
UGA-3049 UGA-06/028 Bugoye Hydropower Project	TronderPower
UGA 3003 - UGA 07/044 National Forestry Authority	National Forestry Authority (NFA)
UGA-3081 UGA-07/017 FAO's Productive Agricultural Livelihoods and Income Security	United Nations Food and Agricultural Organization (FAO)
SAF-2841 SAF-05/008 MERECP	East African Community (EAC)
UGA-2854 – UGA-03/326 Makerere University Institutional Development Programme	Makerere University
UGA-2874 Budget Support	Ministry of Finance, Planning and Economic Development (MFPED)

In the following, the main findings of the review of the various projects and programs are presented. For each program a short description of goals and activities are presented for information, existing climate change and environment-related activities included in the project are presented, assessment of climate change and environmental issues is undertaken and finally specific recommendations to the Embassy are provided.

It should be noted that the Review Team offers a menu of possible actions that the Embassy should consider strengthening the climate change and environmental component of the supported projects and programs. The Embassy needs to carefully review the suggestions and decide on the appropriate course of action. Some of the recommendations can be easily addressed without major resource implications. Other recommendations will have resource implications for the Embassy and need to be carefully assessed in the Embassy's follow-up plan to the Review.

2.2 Support to the Energy including Petroleum Sector

2.2.1 General Comments and Suggestions

The Embassy could in its dialogue with Ministry of Energy and Mineral Development (MEMD) focus on how to enhance the environmental performance of energy supply and consumption and framing energy, including petroleum sector planning, in a climate change framework. Adequate, timely measures can reduce the present climate change, environmental and health hazards related to petroleum development and energy supply and use. This could preferably be done through the use of strategic planning tools, e.g. Strategic Environmental Assessments (SEA), i.e. moving "upstream" in the decision-making process. By integrating environmental considerations into strategic decisions, this can help to ensure that the prudent management of natural resources and the environment continue to provide the

foundations for sustainable economic growth, which, in turn, support political stability. Conversely, inadequate attention to the importance of environmental sustainability risks undermining the chances of achieving sustained development outcomes and durable poverty reduction. Experiences in applying strategic planning tools have repeatedly highlighted two key challenges to achieve greater uptake amongst key decision makers: lack of awareness of the value and importance of such studies and lack of knowledge on implementation when the value is appreciated.

It should be noted that the preparation of strategic studies is analytically challenging and will require the use of highly qualified professionals, some of which might be lacking in Uganda. There seems to be scope to initiate the preparation of a SEA-type of study within the petroleum as well as the energy sector, however as separate but coordinated exercises. Before embarking upon a strategic planning exercise there is a need to carefully review the capacity constraints, ownership and willingness and ability to implement the recommendations of the exercise. This could be perceived as introducing an additional planning level that there is even limited experience in applying in developed countries.

The legal framework for environmental impact assessment (EIA) has been established in Uganda; however, there is lack of capacity to prepare EIAs and to enforce EIA regulations. Therefore there is a need to support efforts to enhance the capacity, increase quality, strengthen enforcement and ensure local ownership of the EIA process. This need should be assessed in relation to the importance of embarking upon initiating a strategic planning process.

2.2.2 UGA 3088 - UGA 08/008 Management of the Upstream Petroleum Sector – Addendum I

Goals and Activities

The overall goal of the program is an efficient state administration of the upstream petroleum sector, capable, in a sustainable manner, of planning, promoting and monitoring oil company investments in petroleum exploration and production, and managing state interests and revenues to the benefit of the economy and people of Uganda.

The purpose of the program is to strengthen the State petroleum administration in Uganda with regard to policy, institutional framework and administrative functions, to strengthen the planning and regulatory functions in the Petroleum Exploration and Production Department (PEPD) and to study the conditions necessary for commercial development of oil and/or gas in Uganda.

The program is divided into the following three main projects:

- Policy Legal and Regulatory framework;
- Capacity building for PEPD; and
- Technical and Economic Studies.

The project is implemented by the Ministry of Finance, Planning and Economic Development (MFPED), MEMD and MWE. Norwegian institutions will provide technical support.

Climate Change and Environmental Issues Addressed in the Program/Project

The Albertine Rift Region is one of the most species-rich eco regions in Africa, making it a global biodiversity hotspot. It has been indicated that there might be oil and gas deposits in 10 out of 22 protected areas in Uganda, which underscores the challenges related to both biodiversity protection and future development of the tourism industry.

Climate change is not addressed as a specific issue in the reviewed documents.

OfD supports a WWF program related to minimizing the negative impact of petroleum-related activities on the environment in Uganda. A committee comprised of representatives from government environmental institutions, the PEPD, NGOs, the oil companies, research institutions and Norway (representing the donor community) was established earlier in 2008 to work on the development of a Sensitivity Atlas for the Albertine Graben in Uganda and in an effort to pool resources (funds, logistics, consultants, personnel, and data sets).

Assessment of Climate Change Issues

Climate change issues are given limited attention in the petroleum sector in Uganda. A working group within the Norwegian OfD has in general assessed the possibilities for providing climate change support within the framework of the OfD. The key recommendations are:

- Include climate change issues in all OfD-discussions and training;
- Offer support to assess the climate change mitigation potential within the sector and to determine the associated costs. Measures with positive impacts on environment and development should be given priority. Reductions in CO₂-emissions of mitigation should be quantified;
- Provide advice on appropriate regulatory and economic instruments and their effectiveness;
- Encourage partner countries to develop a regulatory framework based on international best practice;
- Assess the potential for developing CDM projects within the sector; and
- Assess the need for adaptation within the sector and to include adaptation issues in relevant training activities.

The Embassy and the OfD should review and discuss these recommendations with MEMP and other stakeholders as a basis for further action.

Climate Risk Assessment: 1 – High (due to potential emissions from the sector).

Assessment of Environmental Issues

The EIA system in Uganda needs strengthening. There is considerable need for training in how to prepare EIAs, undertaking consultations with affected stakeholders, conflict resolution, reviewing EIAs, preparation of environmental management plans (EMP), implementation of EMP and enforcing environmental regulations. The capacity within the petroleum sector on EIAs also needs to be strengthened as a complementary effort to strengthen the environmental institutions. There seems to lack of political backing behind environmental concerns in Uganda. There are a number of institutions at the national level involved in addressing environmental issues, reinforcing the need for a strong coordination body.

There are a number of environment related issues that should be considered within the framework of the OfD-support in Uganda, including:

- Development of appropriate environmental regulations and standards relevant to the oil/gas sector taking the existing capacity into account. This should also include systems for granting and enforcement of discharge permits and waste management. A key issue is to provide support to implement the various environment-related issues in the oil and gas policy for Uganda;
- Establish system for compliance monitoring and enforcement of the oil and gas industry including addressing the issue of how this will be financed. In most cases this is a self-financed system through payments from the industry;
- Initiate the development of a comprehensive environmental monitoring system for the Albertine Graben. The scope of such a monitoring system should also take other

concerns into account, e.g. state of environment monitoring and reporting. This will be a long-term issue since there is a considerable need to develop adequate environmental monitoring and response capacity in Uganda; and

- Development of a national oil spill contingency mechanism, including equipment and training.

There are considerable capacity building and training needs that should be addressed.

The mobilization of the civil society is important for an effective implementation of sound environmental laws and regulations. Within the framework of OfD, there is established a dedicated funding mechanism for support to civil society which have cooperation with Norwegian environmental NGOs. This instrument should be considered for use in Uganda. Furthermore, the Embassy could consider directly supporting civil society organizations which have a demonstrated ability to raise awareness and participate (and influence) decision-making processes. Support to civil society can also be obtained through the Norad-supported "Environmental Movements in the South" (EMiS) program, administered by Norwegian NGOs (WWF, Development Fund and Rainforest Foundation).

Cooperation between universities should also be considered as a mechanism to strengthen the long-term capacity in Uganda. Makerere University could be a key player and possibly be a regional competence center for petroleum-related higher education and research.

The Embassy could consider providing support to media and organizations working with transparency and revenue management to ensure a more well-informed debate in Uganda on how the petroleum resources should be developed. Targeted training courses for journalists could be considered, as well as to parliamentarians. The Embassy in Maputo has supported an organization called IMPACTO which has provided targeted petroleum-related training and sensitizing to journalists and parliamentarians.

Conclusions and Recommendations

- *The support to the petroleum is consider very relevant, however, there are a number of issues related to climate change and environment that need to be addressed in a concerted manner;*
- *The Embassy should consider supporting the implementation of a strategic planning process as a basis for developing a strategic development plan for the petroleum sector in Uganda. This will require high-level buy-in and commitment from key stakeholders in Uganda and a careful laid out process to ensure that the key issues are addressed. Preferably this should be done in cooperation with other donors. The value of strategic planning processes depends greatly on the capacity within the responsible authorities to maintain the process and act on the results;*
- *Potential support from OfD to address climate change issues within the petroleum sector in Uganda should be assessed with a basis in the recommendations of the OfD Working Group on Climate Change. Achieved reductions in CO2-emissions should be quantified, if any;*
- *There are a number of environment related issues that should be considered within the framework of the OfD-support in Uganda. This should be based on the oil and gas policy. Possible areas for support include development of appropriate environmental regulations and standards, compliance monitoring and enforcement of the oil and gas industry including addressing the issue of how this will be financed, initiate the development of a comprehensive environmental monitoring system for the Albertine Graben and development of a national oil spill contingency mechanism, including equipment and training. The Embassy should bring up these issues in the dialogue and ensure that the environmental component of OfD considers these issues;*

- *The Embassy should consider providing support to civil society organizations to influence national decision-making processes and to ensure that the petroleum sector adheres to international best practice. OfD has set up a dedicated funding instrument for this and support can be provided to NGOs which have a working relationship with Norwegian environmental NGOs. Furthermore, the Embassy could consider to directly support civil society organizations in Uganda which have a demonstrated ability to influence decision-making processes. Support can also be obtained through the EMiS Program;*
- *The Embassy could consider providing support to media and organizations working with transparency and revenue management to ensure a more well-informed debate in Uganda on how the petroleum resources should be developed. This could also include training and sensitizing of parliamentarians;*
- *There are a number of environment and climate related reputational risks to Norway from the engagement in the petroleum sector in Uganda that need to be carefully considered. The conflict sensitivity of the support should also be considered;*
- *Close cooperation with the World Bank on addressing some of the existing gaps in the environmental management of this sector is recommended; and*
- *The possibility of research cooperation between the universities in Uganda and Norwegian universities on petroleum related issues, with focus on environment and climate change, should be explored. A first step could be a fact finding mission to Uganda from relevant Norwegian institutions (BI, University of Rogaland, NTNU). Makerere University could be a potential partner.*

2.2.3 UGA-3049 UGA-06/028 Bugoye Hydropower Project

Goals and Activities

The overall objective of the ODA-funded component is to contribute to sustainable development in the project area by minimizing negative/enhancing positive social impacts, and provide benefits to project affected households and communities.

Climate Change and Environmental Issues Addressed in the Program/Project

The Bugoye Hydropower Plant is a pure run of the river installations with a capacity of 13 MW. Full Environmental and Social Impact Assessment (ESIA) studies according to World Bank (IFC) standards have been conducted.

The environmental impacts are considered to be minor. The social impacts, however, are fairly large compared with the size of the project. 21 households, or some 150 people, need to be resettled. The total number of affected people in the project area is approximately 1800.

Based on the available information presented there are no major outstanding environmental and social issues with the Bugoye HP. The EIA has been prepared in accordance with IFC's guidelines and the Equator Principles and is approved by NEMA. The developer has presented a credible plan to address the outstanding issue identified by environmental due diligence process.

The Sponsor will seek to have the project registered as a CDM project, meaning that CO2 emission reductions resulting from the project can be certified (CERs) under the Kyoto Protocol and sold on the international market.

Assessment of Climate Change Issues

The project sponsor should assess the issues of potentially increased hydrological risk due to expected climate change, increased risk of natural disasters (floods and droughts), landslides and erosion from the upstream catchment area.

Climate Risk Assessment: 2 - Partial

Assessment of Environmental Issues

Of key concern in the long-term are changes to land use upstream of the power plant and potential impacts on sedimentation and changes in stream flow. The Project sponsor needs to follow the development carefully and should consider implementing Payment for Ecosystem Services (PES) to local communities to preserve the environment. A monitoring system needs to be established to monitor future changes.

Conclusions and Recommendations

- *The project is considered very relevant to increase access to clean energy in Uganda. Overall, the project seems to comply with national environmental regulations and international standards. Implementation of the EMP will be key and the Embassy should closely follow the implementation of the EMP to address possible reputational risk;*
- *The Embassy should request the sponsor to document the GHG implications of the project. This will be prepared as an integral part of CDM documentation;*
- *Long-term climate change will pose an additional risk to the project in terms of changes in stream flow and flow pattern, increased sedimentation and higher risk of floods, droughts and landslides;*
- *The Embassy should include a separate agenda item on environment and social issues in all Annual Meetings, including requesting copies of all relevant communication with NEMA on the implementation of the ESMP and the RAP from the Project Sponsors; and*
- *It is likely that the potential Norwegian support to hydro power will be criticized by environmental NGOs. In case the project sponsors do not implement the EMP satisfactorily criticisms can be levied against the Embassy. Clearly documenting the Embassy's and Norwegian authorities' involvement in the project could prove to be useful.*

2.3 Support to Natural Resources and Environment

2.3.1 General Comments and Suggestions

Agriculture and natural resources remain the backbone of the economy in Uganda and in order to contribute to climate change adaptation, its development should take place in such a way as to improve livelihood security, in particular among the poorest. Enhancing sources of livelihood in this sector would significantly improve local people's resilience in a changing environment. Because the majority practices rainfed agriculture, availing water for small scale irrigation could reduce the risk of crop failure and contribute towards improving crop production.

Due to the relatively limited information on adaptation to climate change in Uganda, an in-depth look at the traditional coping strategies and livelihood adjustments to climatic changes could offer some insights on how adaptation to extreme climate events and long-term climate change may best be promoted among the various livelihood groups.

Interventions within agriculture should specifically be targeted at the poor and most vulnerable, strengthening their present livelihood security as well as reducing their vulnerability to future climate change. An appropriate adaptation approach therefore seems to be building community resilience through strengthening the existing livelihood and coping strategies so that they can cope better with any adverse impacts in the future and take advantage of opportunities presented. In order to reduce current and future vulnerability, it is important that the changes being instituted do not threaten the resource rights and access of the poor to basic resources. In order to strengthen adaptation, reforms in resource access and governance should encourage equitable access to basic resources. Institutional changes, including devolution of governance, privatization of natural resources, and tenure changes are critical in shaping local management, access and control over resources used in livelihood strategies. Such changes may determine the success or failure of any adaptation measure aimed at benefiting the poor or vulnerable.

Adaptation and strengthening of livelihood security are necessarily cross-sectoral, since diversification is a key household strategy to cope with climate stress. Livelihood options are also affected by developments in a number of sectors, including forestry, agriculture, water, infrastructure and health. Development of effective adaptation policies entails coordination between sectors, ministries and institutions.

Uganda is experiencing a massive deforestation through unsustainable forest use, but also through the more or less totally uncontrolled conversion of often-marginal forest land to agricultural land. The discussion on the role of forests in mitigation of climate change has increased lately. The concept of reducing emissions from deforestation and forest degradation (REDD) has become a key priority of the Norwegian government. Uganda will be receiving support from the World Bank's Forest Carbon Partnership Facility (FCPF) to develop a national REDD strategy. The Embassy needs to closely follow the REDD work in Uganda.

At the core of the discussion on REDD is to create incentive mechanisms (payments) to those responsible for reducing deforestation and degradation. REDD therefore represents a new way of thinking compared with both traditional development aid and forest conservation. The key is to establish performance based systems, where payment is made to those that produce 'certified emission reductions' (CER). Carbon credits can become a new cash crop for Uganda and its population, produced locally and sold globally. Rewards will be performance based, i.e., depending on the results achieved, and that these must be documented and verified through a credible system of forest information. Establishing a REDD mechanism along these lines is the major challenge for the REDD strategy of Uganda. It requires detailed information about changes in the carbon stock of forests, appropriate incentives given to decision makers and communities to undertake activities that reduce deforestation, and that the flow of information and incentives are embedded within a set of effective institutions to ensure good governance. A national REDD regime must transfer the rewards to those taking the action on the ground: the forest owners/users/managers (the question of de facto ownership is in many cases not clear).

2.3.2 UGA 3003 - UGA 07/044 National Forestry Authority

Goals and Activities

The goal of the project is to develop an integrated forest sector that achieves sustainable increases in the economic, social and environmental benefits from forests and trees by all the people of Uganda, especially the poor and the vulnerable. The specific objective is to help establish the National Forestry Authority (NFA) to manage the Central Forest Reserves (CFRs) on a sustainable basis, and supply other high quality forestry-related products and services in accordance with sound financial and commercial practices.

The key planned outputs are:

- Effective investments in infrastructure, transport, and equipment.
- Well-managed public goods and environmental services
- Increased revenues from contracts for harvesting in the Central Forest Reserves
- Partnerships to co-manage Central Forest Reserves for forestry purposes.
- High quality advisory, information and tree seed supply services.

The project is implemented by the NFA supported by Statskog SF.

Climate Change and Environmental Issues Addressed in the Program/Project

The overall guiding mandate and policy framework for NFA is captured in a number of recent documents: Forestry Policy (2001); the National Forest Plan (2002); the Forest Bill (2002); and the Forestry and Tree Planting Act (2003). As seen in the AD the core themes are linked to conservation and sustainable development. The AD is capturing the importance of forest biological/environmental resources for the livelihood of a significant percentage of the rural population in Uganda. Reference is also made to some of the challenges facing this resource base. Marginal reference is made in the AD to strategies that should govern the balance between (sustainable) use and conservation objectives. Under objective 2 regarding the collaboration between NFA and Statskog reference is made to the need to manage CFRs according to sound environmental, social and economic standards but little information about activities/strategies to be implemented under this objective can be found.

No reference is found regarding the possible impact of climate change.

Assessment of Climate Change Issues

While the most familiar focus on forests and its link to climate change is on its role in mitigation one should also realize that climate change will potentially have a negative impact on forests. This may be a consequence of massive flooding and landslides as well as an increase in temperature resulting in a change in species composition.

Uganda is experiencing a massive deforestation, through unsustainable forest use, but also through the more or less totally uncontrolled conversion of often-marginal forest land to agricultural land. Combined with the anticipated impact of climate change the overall ecological integrity of the remaining forests under the management of NFA may be seriously threatened.

Regarding the positive role of forests in climate mitigation effort the ability to sequester and store large quantities of carbon has opened up new opportunities and challenges for forest managers. The NFA could be encouraged to develop projects to test alternative approaches and demonstrate the potential for communities in Uganda to generate financial flows from the sale of carbon credits. These projects would also serve to stimulate the development of local support, advisory and certification services to help reduce the costs faced by subsequent entrants into this market.

The voluntary carbon offset market comprises companies, organizations and individuals with a social responsibility motivation to support environmental and climate protection schemes in developing countries. Originally very ad hoc, this market is now maturing and expanding with the emergence of independent quality standards to support buyer's confidence in the offsets being sold (e.g. the Gold Standard created by the WWF).

Unlike the voluntary carbon offset market, the Kyoto Compliant market is based on methodologies approved under the CDM. It is a much larger carbon credit market. The establishment of a range of funds based upon purchases of CDM-compliant carbon (such as the World Bank's BioCarbon fund and the Community Development Carbon Fund) represents a

fresh set of opportunities for Uganda. However, the costs of participating in this market are high. Through the Norad CDM budget line support could be provided to potential investors to meet the entry and validation requirements of this CDM market. There are also opportunities to build on work already initiated by the Uganda Carbon Bureau to interest local companies in Uganda in offsetting carbon as part of their Corporate Social Responsibility (CSR) programs.

Climate Risk Assessment: 2 - Partial

Assessment of Environmental Issues

The CFRs constitute an extremely valuable source of biological diversity in Uganda. In addition, the reserves have an important function as water catchments and holding areas. In the AD and in the Agreement some reference is made to the conservation values of these area but little or no reference is made to how to use this resources base without compromising the conservation values. It could be argued that there seems to be a mismatch between the conservation values and the strategies employed to secure those values for future generations. One example is that there do not seem to be a system in place to undertake an EIA when a part of a central forest reserve is leased or logged.

Conclusions and Recommendations

- *Norway's long and continuing support to the forestry sector in Uganda provides a unique and effective platform for dialogue with NFA and relevant authorities regarding climate change issues as well as ability to "green" future support to NFA. A end of project review is combined with an appraisal of a new phase of the support to NFA have been initiated and the consultants have already been briefed on key issues related to climate change and "greening";*
- *The future Norwegian support to the NFA should be aligned to the process to establish a REDD framework in Uganda. The initial process will be supported under the support from the World Bank's FCPF. The design of the next phase should consider specifically how the support can be used to strengthen the national REDD efforts where NFA will a (the) key player in Uganda. The new agreement should allow some flexibility as the formulation of a REDD strategy may take some time. Flexibility is required to accommodate support to key issues as components in a new REDD strategy in Uganda;*
- *The Embassy should closely follow the NFA's work on developing a national REDD-strategy and should maintain a close dialogue with the FCPF (World Bank);*
- *NFA is in an African context well placed to supply historical data regarding deforestation and possibly also rates of degradation in Uganda as a prerequisite to comply with key issues regarding a possible future REDD regime. Continued support to biomass inventories is there essential. Support to biomass inventories may be expanded to establish a more comprehensive environmental monitoring centre;*
- *More support to collaborative forest management should be considered as NFA do not have (and should not have) the capacity to take on all management responsibility of managing forest reserves in Uganda. This will also prepare community groups for a potential REDD regime (to build capacity to handle the transfer of incentives and benefits as a reward for improved management of forest areas)*
- *The potential of using the voluntary carbon market should be explored further. This could require supporting private actors in the market;*
- *Possible strategic partnership with the Katoomba group should be considered to allow for technical and professional input to NFA regarding the development of a REDD strategy in Uganda;*
- *The Embassy should in its dialogue with the NFA request information on the NFA's environmental regulations, if any. To safeguard important biodiversity issues NFA*

should be encouraged to develop environmental procedures, including the need to prepare EIA, regarding planned change in land use (e.g. conversion of degraded reserves to other land use options like plantations etc) and large logging operations;

- *The overall ecological integrity of CFRs need to be established as a consequence of the combined impact of climate change and deforestation and forest degradation;*
- *In the dialogue the Embassy should also raise the issue of how capacity and competence at the district level could be enhanced to improve management of district and local forests in view of the need to improve the overall climate mitigation efforts.*

2.3.3 UGA-3081 UGA-07/017 FAO's Productive Agricultural Livelihoods and Income Security

Goals and Activities

The goal of the project is to improve the livelihoods, food and income security status of displaced and returning communities in the Acholi, Lango and Teso sub-regions of Northern Uganda. The following outputs are planned:

- Increased access to farm inputs for smallholder farmers;
- Increased availability and quality of seeds and vegetative material for smallholder farmers;
- Improved knowledge of farming techniques for smallholder farmers; and
- Improved entrepreneurial skills for rural households.

The overall project design is based on the use of Farmer Field Schools (FFS) as the main source of training and information exchange, together with the use of cash transfers. The project is implemented by the United Nations Food and Agricultural Organization (FAO) in cooperation with the Office of the Prime Minister, Department of Disaster Preparedness and Refugees. A number of other government institutions and NGOs in the area are also actively involved in the project.

Climate Change and Environmental Issues Addressed in the Program/Project

The AD states that protection of environmental sensitive areas is a highly relevant issue in relation to the re-establishment of productive agriculture in the areas. Particularly, the ecological aspects should be within the scope of the project as part of the training.

The FFS approach is dynamic, participatory and environmentally friendly with the potential of benefiting the wider community through sharing of knowledge.

The need for undertaking environmental assessment of some of the activities is not addressed in the AD. No reference is made directly to climate change issues in the AD.

Assessment of Climate Change Issues

A change in climate may reduce Uganda's agricultural sector performance which contributes a major share of GDP. Already farmers are experiencing lower yields and more diseases. For the pastoralist the seasonal rhythm may change as the variability in rainfall creates a new environment and where traditional transhumance behavior is changing. Cattles are experiencing more and maybe new type of diseases and the herders need to look for new grazing areas. With an increase in floods and landslides, increased erosion of fertile topsoil and the washing away of crops underscore the challenges faced.

Many of the activities that are included in this particular program are supporting climate sensitive production activities, and in this way these "support" activities can be said to be indi-

rectly sensitive to climate change – at least the success of the support strongly depends on the outcome of the underlying activities. A proper design of adaptation strategies for agriculture in Uganda should be based on improved information about climate variability and change at a geographical level that matches agricultural districts, different crops, livestock and agro forestry. Such a basis is not as yet established in Uganda. Improved climate information can act as a key input to the planning of adaptation strategies, and there is here a key link to the support to Makerere University.

Farmers should be trained to use mixed cropping and diversification of crops as a form of insurance against rainfall variability and pests attack. The risk of complete harvest failure due to a climatic event such as drought, intense rainfall or high or low temperature spells, is reduced by having different crops in the same field or various plots with differing crops since not all crops and fields are affected the same way by such climate events. Irrigation, providing crops with water from rivers, streams and small dams, is another strategy to compensate for unreliable rainfall conditions. Irrigation may allow the growing of crops such as vegetables in areas of low rainfall as well as during the dry season and droughts. These may form an alternative source of food and income when rain fed crops fail.

In agricultural livelihood programs it is important to include training and advisory on potential climate (drought) resistant crops and livestock and how risks can be spread through the use of diverse seeds, management practices and livestock.

Training of extension service staff about climate risks and coping measures for farmers and enterprises should be provided. Development of a catalogue of coping measures that can be used in relation to expected variability in rainfall and temperature could also be considered.

Pilot initiatives to introduce more sustainable practices are many in Africa. Key principles involve making use of natural processes, it should respond to local climatic conditions and soil qualities as well as technological and socio-economic factors and conditions. Conservation agriculture is one of the most specific and promising ways of implementing sustainable agriculture in practice. It relies on three basic principles: 1) minimum soil disturbance or if possible, no tillage seeding; 2) soil cover: if possible, permanent; and 3) useful crop rotations and associations. Across Africa, interest is growing to adapt, adopt, and apply these principles to attain agricultural performance that improves productivity, protects the environment and increase environmental resilience. In Uganda this practice is of more recent nature but early pilots clearly indicate the potential to introduce highly productive practices that are more resilient to anticipated vagaries of climate change as well as more in lined with environmentally benign practices.

Climate Risk Assessment: 2 – Partial assessment

Assessment of Environmental Issues

The project takes place in an area in Uganda which appears to be very sensitive to degradation of ecosystems and also quite vulnerable to the impact of climate change. In many ways the project has the potential to address key issues related to the need to adjust to the uncertainties of climate change as well as environmental issues. The AD addresses some of the relevant environmental issues but not in a detail that enables a clear understanding of how the project intends to address this in sufficient detail to be able to monitor this as a part of the overall project monitoring

The local multiplication of cassava, sweet potatoes and crop seed appears to be a well balanced strategy and sensitive to traditional knowledge. On the other hand modern breeding practices have the potential to bring forward varieties that may respond positively to a change in the environment as well as having improved nutritional qualities. It should be

noted that the use of Genetically Modified Seeds (GMOs) is not an option that should be pursued according to Norwegian policies.

Conclusions and Recommendations

- *The overall conclusion is that the project seems to be well placed to address issues related to climate change, reduce vulnerability to natural disasters as well as environmental issues within the overall objective of the project. The organization around farmer field schools is potentially a very effective method to bring forward and discuss various extension messages. It is also contributing to the strengthening of local institutions that may be used effectively to address issues related to climate change;*
- *The project takes place in an area in Uganda which appears to be very sensitive to degradation of ecosystems and also quite vulnerable to the impact of climate change. The project clearly has the potential to strengthen the resilience of local communities to respond to climate change issues in the area;*
- *It is already evident that traditional ways of planning the agricultural season may be jeopardized as a consequence of climate change. There is a need to get better and more reliable data regarding weather forecast. In the dialogue with the government as well as with FAO the Embassy should focus on:*
 - *Assessment of the availability of tools for seasonal forecasts that can be used in Uganda, including regional efforts and practices It is suggested that the potential use of seasonal weather forecasts in agriculture is assessed through the following activities:*
 - *Assessment of the availability of tools for seasonal forecasts that can be used in Uganda, including regional efforts and practices; and*
 - *Assessment of the experiences with using seasonal forecasts in the agricultural sector in other African countries or other regions considering the whole process from generation of forecasts, dissemination of information, distribution, and advice to farmers.*
- *If the Embassy considers supporting similar projects or extending the current project the following issues should be considered:*
 - *The need to identify and support seasonal coping strategies for different crops that can help to cope with 3 to 6 months weather variations;*
 - *The use of conservation farming methods may more effectively make use of available inputs and at the same time increase the resilience of the agro-ecosystem to deal with anticipated variability in rainfall;*
 - *While the use of local varieties of seed stock seems highly appropriate consideration should be made to consider (with particular reference to cassava) a careful introduction of other varieties that have improved nutritional qualities and at the same time respond positively to the change in environment as well as to cultural factors;*
 - *The introduction of agro forestry methods appropriate for the area is one aspect that may be considered with a potentially high level of positive synergy with conservation farming and other sustainable agricultural practices as well as reducing the pressure on the remaining forest base (grow your own fuel wood etc);*
 - *Various forms of water harvesting and watershed management should be considered to prepare for climate change with anticipated change in rainfall pattern as well as in the intensity of rainfall;*
 - *When food for work is used as a strategy to alleviate serious humanitarian issues (like hunger etc) focus on environmental restoration like terracing, tree planting etc may be a useful strategy to consider;*
 - *As the focus for future support to NFA is also partly in Northern Uganda possible synergy should be explored;*

- *Use of cash schemes may stimulate local demand for food crops grown locally;*
- *The Embassy should address the issue of possible use of GMO seeds in the project; and*
- *FAO's role need to be considered and support to enhancement of the government structure could be a part of the next phase of the project.*

2.3.4 SAF – 2842 Mount Elgon Regional Ecosystem Conservation Program (MERECP)

Goals and Activities

Support to conservation and development activities on the Ugandan side of Mount Elgon has been provided by Norway since 1988. The current agreement was signed in September 2005 with the Secretary General of the East African Community (EAC) to signify the transboundary aspect of the Mount Elgon ecosystem. The current agreement is a follow up of a year long inception phase. IUCN (World Conservation Union) is contracted by EAC to implement the project.

The goal of the program is "Integrated ecosystem conservation and management for sustainable development and enhanced well being to people and environment". The purpose is "Conservation status and benefits of Mount Elgon ecosystem to environment quality and livelihoods enhanced". There are four main objectives:

- Natural resources in and outside protected areas protected and managed integrated and efficiently;
- Sustainable development in the Mount Elgon ecosystem enhanced;
- Conservation and management needs of the Mt Elgon Ecosystem integrated into national, regional and international development framework; and
- MERECP effectively implemented as a regional transboundary program.

A mid term review (MTR) concluded earlier this year has initiated a process to re-design the project to address partial lack of performance. It is anticipated that the redesign will lead to a readjustment of the objectives of the program.

Climate Change and Environmental Issues Addressed in the Program/Project

The overarching goal of the program is linked to the need to conserve the ecosystem of Mount Elgon that in addition to its unique biodiversity is the water tower for a substantial part of the population in Uganda and Kenya. Earlier phases of support have seen a transition from purely conservation interventions to more focus on improved livelihoods for communities neighboring the protected area. In the present phase this trend has continued while also attempting to address issues at a national and regional level. An estimated two million people derive their livelihood in the catchment area. The logic behind the design of the program is to conserve this ecosystem and allow it to continue to provide ecosystem services to the people in Uganda and Kenya. While the overall objective and purpose of the program is linked to conservation and as such the program must be considered an environmental program activities within the program may have negative environmental impacts and the overall design may not align well with issues related to the anticipated impact arising from climate change.

According to the AD environmental considerations are well integrated both in the objective and the approach of the MERECP. It was not seen as necessary to carry out an EIA of the program. In the AD (dated August 05) no reference is made to climate change issues as such.

Assessment of Climate Change Issues

Mount Elgon is an area with high biodiversity values and at the same time it is an extremely important water catchment area for a large area in Kenya and Uganda. The increased variability in rainfall pattern may partly be offset by the regulatory function of an intact ecosystem. On the other hand in a degraded ecosystem this function may be significantly disturbed.

The anticipated primary hazards that can be attributed to climate change are that the area will experience an increase in droughts and higher temperatures as well as landslides and floods. It is anticipated that the area will experience increased deforestation as farmers are forced to move to higher areas and this will be compounded by the growing number of “climate” refugees from other areas even more vulnerable to climate change in both Uganda and Kenya. On the other hand the cooler temperatures on the higher slopes of Mount Elgon may allow the continuation and possible expansion in coffee growing as even a relatively minor increase in the average temperature in other areas of Uganda is likely to reduce coffee growing areas to one-tenth of their former size. The increased variability in rainfall pattern and the increase in temperature will also have an impact on species loss, both domestic and wild.

The change in rainfall pattern is likely to have a significant impact on agricultural production in the area. This may be attributed to factors like the inability to predict appropriate sowing dates and an increase in both drought periods as well as periods with intense rainfall. The increased variability in the rainfall will have special impact on rainfed agricultural production systems.

It should be possible for MERECP to pay more attention to the need to support activities enhancing adapting to climate change as well as contribute to the mitigation of the release of important greenhouse gases by supporting activities that will lead to reduced deforestation and forest degradation. It may also be an option to be more involved in ecosystem restoration through scaling up agro forestry interventions as well as supporting communities getting involved in afforestation/reforestation activities. By doing so it may be possible to tap into the growing international market for carbon offsets.

The role of Mount Elgon as a water tower in the region may only be partly understood and this role is related both to ecosystem services as well as to its role in local climate regulation.

In the AD, the PD and other documents about MERECP the potential impact of climate change is not addressed. This is not surprising as the current phase of the program has been influenced by earlier experiences in the program area where the potential impact of climate change was not seen as a major challenge to be addressed by the program. It should however be quite clear that climate change will impact the people and the ecosystem in the program area. While there may still be uncertainties linked to the various models on the impact of climate change at various levels already local people are devising coping strategies to adapt or reduce the negative impact of climate change. Most rural populations in Africa have devised various coping strategies to be able to adapt to climatic variability. The challenge for the people in the Mount Elgon area is if traditional coping strategies suffice to alleviate the anticipated “new” situation and how the MERECP should respond to this.

Climate Risk Assessment: 2 - Partial

Assessment of Environmental Issues

In spite of the strong environmental argument behind continued support to conservation of Mount Elgon it is clear that a number of interventions designed to address the situation may

themselves have negative environmental consequences. One example is the introduction of exotic breeds that in the short run may seem to be more productive than traditional breeds but in the long run create other environmental problems. Strict enforcement of traditional conservation regulations may lead to a negative view among the local population living adjacent to protected areas and this animosity may lead to illegal use, use of fires to collect honey etc. It may also lead to a situation where resources outside protected areas are overused and in the long term impact negatively on the overall objective in the first place.

Extremely high population pressure (among the highest population densities in Africa) is in itself a major challenge as the vast majority rely almost entirely on agriculture and the collection of a wide range of products in the forest ecosystem. In theory this in itself may not be negative but it appears quite clear that the current population pressure is negatively impacting the overall resource base.

Environmental issues in the Mount Elgon area range from reduction in biodiversity values to land degradation, water pollution, loss of valuable genetic resources and soil erosion. The rationale behind the long term intervention to support the continued integrity of the ecosystem is to alleviate or at least reduce the pressure on the ecosystem. It is anticipated that the activities promoted to do this has a potentially positive or benign environmental impact. The AD as well as the PD does not adequately address this hypothesis. One example, as also seen in the MTR, is the introduction of high yielding breeds of cattle that seems to be more productive in the terms of yield (in this case milk). On the other hand this may lead to genetic erosion as the use of traditional breeds may be reduced and access to these breeds in the future for breeding purposes may also be not possible.

The intensive use of chemical fertilizers in some of the areas around Mount Elgon has also had negative environmental consequences. The present enforcement of strict rules regarding the use of natural resources within the boundaries of the National Park has led to an unsustainable harvest of resources outside the park.

Both in the MTR, in research papers as well as in line with key international policies a change in the relevant policies to allow controlled harvesting of resources should be addressed

Conclusions and Recommendations

- *The MERCEP is considered as a highly relevant intervention to increase local communities' resilience to climate change, protection of biodiversity and mitigation of climate change through REDD.*
- *Below some key issues that the Embassy could address in its dialogue that will increase the resilience towards climate change and have a positive environmental impact have been suggested:*
 - *While it is important to build on traditional knowledge and coping strategies MERCEP should and could be instrumental in initiating a response strategy based on adapting these to a new situation addressed above;*
 - *At various levels MERCEP should recognize the actions and response already adapted by local communities. One issue is to assist the communities with their analysis of the situation and not necessarily prescribe actions;*
 - *To increase the resilience and reduce the vulnerability of farming practices in the area focus should be on increasing access to irrigated water. Increased focus on simple water harvesting methods could be looked into;*
 - *Support to strengthen REDD related activities includes the need for proper inventories, establishment of an incentive system as well as the need to support a verification system. Forest fires may be very destructive if not managed properly and the loss of biodiversity and negative climate impact of this may*

limit the ability to attract funds for carbon offsets. Focus on collaborative management may reduce this. Various agro forestry interventions have already been introduced but have the potential to be scaled up. This may be seen as a response to the need to adapt to climate change, it will contribute with carbon sequestration as well as provide positive environmental benefits;

- *Support to conservation farming may reduce erosion, enable farmers to use agricultural plots without resorting to shift and burn, is an importation adaptation strategy as well as if properly done it may sequester carbon instead of releasing it (as the case with many traditional farming practices). While organic fertilizers are promoted already this effort should be strengthened to minimize negative impact of chemical fertilizers experienced;*
 - *The use of biomass energy is one of the primary agents behind both deforestation and forest degradation. Upgrading the focus on biogas, improved stoves etc may have an impact on health as well as reducing the pressure on the remaining biomass resources. Development of mini-hydro could also be considered and by bundling these efforts CDM support can be sought; and*
 - *Focus on increased market access may contribute to a positive impact on livelihood.*
- *Some of these issues have already been discussed with the consultant contracted to facilitate the redesign of the project.*

2.4 Support to Research and Higher Education

2.4.1 General Comments and Suggestions

Climate change has implications for many economic sectors. Integrating climate issues into other aspects of development work (by mainstreaming them into strategies for growth and poverty reduction) and defining a common agenda for action will require investments in research and knowledge. Uganda like most developing countries has severe capacity building and institutional strengthening needs that should be addressed. Support to research and higher education can help effectively to address the issue of shortage of qualified staff.

2.4.2 UGA –2854 – UGA-03/326 Makerere University Institutional Development Programme

Goals and Activities

The goal of the program is to build capacity for optimal utilization of scarce academic talents in national policy formulation and poverty eradication. Overall, the strategy is to relate higher education to the needs of the society by the development of adequate human resources, improving quality of research and increasing communication with relevant actors.

There are four components in the program:

- Good governance and gender mainstreaming;
- Food, nutrition and value addition;
- Strengthening university management; and
- Development of infrastructure and ICT.

Climate Change and Environmental Issues Addressed in the Program/Project

There are no specific environmental elements, however, the “Food, nutrition and value addition” component includes education in how to enhance food production and improve nutrition. Support is given to the Faculties of Agriculture, Forestry and Nature Conservation and the Meteorology Unit, respectively.

The AD mentions specifically that it was not found necessary to carry out an EIA.

Assessment of Climate Change Issues

Makerere University could undertake specific capacity building efforts in order to support the development of improved information about climate and climate vulnerabilities. This includes research and education on climate variability, extreme events, changes in the local climate regime in different time frames and uncertainties. This should also include climate modeling and projection of climate issues, as well as analysis of climate variability and coping strategies that local communities and sector institutions already undertake and of the sufficiency of these measures. This activity can be undertaken by the Meteorology Unit.

Within the Faculties of Agriculture and Forestry and Nature Conservation there is scope to develop special short term training issues at university master level in order to establish a technical basis for climate change vulnerability focusing on the water and agricultural sectors. Research and training in the development of and use of alternative methods to produce charcoal could also be considered in cooperation with the Forestry College.

Modeling of climate change impacts and resource assessment requires the use of advanced equipment, e.g. geographical information systems (GIS) and remote sensing. Enhancing the remote sensing capability is especially relevant in a REDD-context as a basis for establishing baselines and to monitor the level of deforestation and forest degradation. Makerere University could play a key role in this activity in the future. This could be done in close collaboration with the NFA.

Climate Risk Assessment: 3 – none.

Assessment of Environmental Issues

Environmental impacts of no-regrets actions within the agricultural and natural resource sector should be included in the various training programs provided by the university. Furthermore, there is a possibility to strengthen the focus on sustainable use of natural resources.

Conclusions and Recommendations

- *The support to research and higher education is considered very relevant to increase the long-term capacity in Uganda to deal with the future impacts on climate change. Future support could be aligned with the Norwegian priorities, e.g. climate change, REDD, clean energy and petroleum;*
- *The Embassy should initiate a dialogue with Makerere University how climate change issues can be included in the various educational programs, especially within the faculties receiving support through the program. Issues related to REDD should also be included. This should preferably be done in conjunction with the discussions on the planned MTR;*
- *Makerere University could initiate closer cooperation with the NFA on GIS and remote sensing issues, in particular in relation to RED. Furthermore, potential areas of joint interest with the R&D-component of the Norwegian-supported Sawlog Production Grant Scheme should be explored;*

- *Makerere University could potentially play a key role in strengthening the climate and weather forecasting in Uganda. This is of key importance to the adaptation of agriculture to climate change;*
- *Cooperation with Norwegian universities and research organizations could be strengthened through the SiU program. University of Life Science (UMB) is a key counterpart; and*
- *The Embassy should consider how environmental, natural resources management, climate change and REDD issues can be included in other activities and programs supported by the Embassy to complement the support to higher education.*

2.5 Budget Support

2.5.1 General Comments and Suggestions

Climate change vulnerability should to the extent possible be integrated into the long-term development plan, “normal” annual budgeting procedure and within sectoral programs. Current natural disaster and climate vulnerability experienced in Uganda will influence the performance of various development activities across multiple sectors such as agriculture, fishery, forestry, water, sanitation, infrastructure, health, energy, and industry. It is therefore a critical factor in the achievement of the goals described in PEAP as well as the MDGs that an assessment of the risks arriving from climate change is considered. This should be done as an integral part of the sectoral and macroeconomic planning that goes on as part of the PEAP process and includes goal setting, monitoring, and evaluation. The Embassy could facilitate this through supporting analytical studies addressing the cost of environmental degradation, environmental health and climate change.

2.5.2 UGA –2874 – Budget Support Phase II

Goals and Activities

The development goal and overall objective of the program is to support the GoU to implement the PEAP, and thereby contribute to achievement of the overall goal of the PEAP to reduce the incidence of poverty in Uganda to 10 percent by the year 2015. The PEAP has five key pillars: (1) economic management; (2) production, competitiveness and incomes; (3) security, conflict resolution and disaster management; (4) governance; and (5) human development.

The expected outcome of budget support is to enhance GoU’s capacity to reduce poverty.

Norway has reduced its’ budget support the last years and a new agreement has not yet been signed (one-year addendums are being made).

Climate Change and Environmental Issues Addressed in the Program/Project

The PEAP includes several references to the environment, see box 1 below.

The GoU has recognized the importance of disaster risk reduction and made it its third top-most priority in the PEAP. A number of environment project are implemented in Uganda. The budget support in Uganda has largely been used as a complementary mechanism to promote relevant reforms. According to the joint donor evaluation of budget support³ the GoU funds only 10% of the recurrent budget of NEMA, with the rest supplied by donors. This evaluation concludes that “...it is evident that the degree of political backing is the major fac-

³ International Development Department, University of Birmingham. 2006. Evaluation of General Budget Support – Uganda Country Report.

tor behind whether effective progress is made in tackling policy cross-cutting issues, which the environment sector, in particular, has not enjoyed.” (IDD, 2006).

Box 1: Illustration of the values PEAP attached to the environment

- *The cost of NR degradation is 17% of GNI per year.*
- *Forests provide economic value \$360m of which only \$112m is captured in the official state.*
- *Average distance travelled to collect firewood has risen markedly from 0.06km in 1992 to 0.73km in 2002.*
- *The annual direct production value of wetlands range between \$300-600 per hectare.*
- *Purification and carbon sequestration in values go up to \$ 10,000 per hectare.*
- *The median time to collect water is 30 minutes.*
- *The presence of electricity in a village increases households’ consumption by 10%.*

Source: PEAP (2004/05)

Assessment of Climate Change Issues

Uganda has just recently started preparing the next five year National Development Plan which will replace the PEAP. In concept notes there are explicit references to climate change as a key development challenge. Parceled with natural resources and environment, it features as one of the ten major themes on which working papers will be produced. NEMA is the lead institution. There are however, doubts about how effectively climate change can be integrated into the planning process⁴.

As part of the continued dialogue with Uganda and other donors the Embassy could consider to raise the following issues in the context of the budget support dialogue, as well as in the sector dialogues:

The **current climatic variability** in Uganda needs to be addressed through concerted actions. Floods and droughts already cause severe consequences in parts of Uganda and the emergency preparedness system is not able to cope with the existing climate variability. The reduction of vulnerability to current climate hazards and the prevention of recurrent disasters are the cornerstone for building future resilience. There is a need to ensure mainstreaming of an integrated approach to climate change adaptation and disaster risk reduction into key sectoral policies, such as agriculture, energy, natural resource management and urban development. The link between disaster risk reduction activities and adaptation activities should be strengthened.

There is a need to convince the MFPED to investment in climate change adaptation and disaster risk reduction. This ministry’s and other key ministries’ ownership of the disaster risk reduction and adaptation agenda is at the crux of genuine change.

Economic growth is often constrained by poor environmental health conditions—resulting in illness and consequently lost earnings, and increased medical costs. **Losses due to environmental degradation** in Uganda are considerable, see above. Significant causes continue to be loss of forest cover, erosion, water pollution due to industrial and domestic waste, over-fishing, destruction of native fish species by introduction of foreign species, over-grazing, and encroachment on wildlife areas and wetlands.

Climate Risk Assessment: 3 - None

⁴ LTS International, July 2008. Climate change in Uganda: Understanding the implications and appraising the response. Scoping mission for DFID Uganda.

Assessment of Environmental Issues

There are good opportunities to strengthen the mainstreaming of environment in the development plan by demonstrating the linkages between environment, poverty, natural resources, health and climate change. This requires however, considerable analytical work.

Norway is supporting the Poverty and Environment Initiative (PEI) implemented by UNEP and UNDP. Uganda is included in the PEI and the key objectives of the program are inclusion of environmental sustainability as a central objective in national development strategies, such as poverty reduction strategy papers (PRSPs), MDG implementation plans or equivalents; increasing national budget allocations towards the environment; and building the long-term capacity of the government to integrate environmental concerns into the design and implementation of development plans. Norway is also providing support to analytical work prepared by the World Bank through the TF ESSD (Trust Fund for Environmentally and Socially Sustainable Development). Through an active use of existing analytical work and commissioning of new studies the donor community can help the GoU to strengthen the analytical underpinning of future development plans. It should be noted that it will be difficult to influence the next development plan since work is already under way to prepare it. In this manner donors can enhance the foundation for increasing the GoU's commitment to address environmental and climate change issues in long-term development plans.

Conclusions and Recommendations

- *The structure of the policy dialogue under the budget support allows for opportunities to mainstream environment and climate change issues, however, the dialogue should be used sensitively, to avoid overwhelming it. Therefore soliciting support from other donors to raise environmental and climate change issues will be important;*
- *Norway is supporting relevant analytical work through the PEI implemented by UNEP and UNDP and the World Bank which could be used actively by the donor community to make the case for increased investments in climate change mitigation and adaptation and the environment;*
- *Key results of the climate change analytical work should be presented to the climate caucus in the Parliament (if it exists!);*
- *The Embassy should consider supporting analytical studies jointly with other donors that can make the case for investing in environment, preventive measures to reduce impacts of natural disasters and mitigation and adaptation to climate change. A key focus should be on Uganda's ability to deal with current climatic variability; and*
- *The Embassy should continue its continuous dialogue with the GoU on climate change relevant issues and use relevant foras (e.g. Sector Working Groups/bilateral meetings) to bring up the most pertinent issues.*

ANNEX I: TERMS OF REFERENCE (TOR)

Terms of Reference

Uganda - Review of the Embassy's Development Assistance Portfolio. Climate Change Screening – ('Climate Proofing') and Environment ('Greening of the Portfolio')

1. Purpose of the Climate Change and Environment Review

The overall purpose of the Review of the Embassy's portfolio is to:

- Undertake climate change risk screening of the portfolio in order to identify not only development programs at risk of climate change but also those that are not climate sensitive. The Review should focus on assessing the climate sensitivity and vulnerability of the development programs supported by the Embassy.
- Identify possible ways and means of addressing/integrating appropriate environmental concerns in the current agreements within present framework and budgets, and for possible future phases of the various programs. This should include issues related to 'do no harm' as well as 'do good'.
- **Optional point** - Organize an internal seminar – learning event - for Embassy' staff to provide staff with updated information regarding the implementation of the government's environmental action plan and relevant climate change activities.

It should be noted that a key purpose of the Review is to initiate a process between the Embassy and development partners where issues related to climate change and environment can be put on the agenda and be included in future dialogue.

2. Scope of the Review

The team will focus its Review on a selection of development programs in the Embassy's portfolio. The Embassy has identified the following programs to be reviewed:

PTA number and name	Agreement and implementing partner
UGA 3088 - UGA 08/008 Management of the Upstream Petroleum Sector	Ministry of Finance, Planning and Economic Development (MFPED) Ministry of Energy and Mineral Development (MEMD) Ministry of Water and Environment (MWE)
UGA-3049 UGA-06/028 Bugoye Hydropower Project	TronderPower
UGA 3003 - UGA 07/044 National Forestry Authority	National Forestry Authority (NFA)
UGA-3081 UGA-07/017 FAO's Productive Agricultural Livelihoods and Income Security	United Nations Food and Agricultural Organization (FAO)
SAF-2841 SAF-05/008 MERECP	East African Community (EAC)
UGA-2854 – UGA-03/326 Makerere University Institutional Development Programme	Makerere University
UGA-2874 Budget Support	Ministry of Finance, Planning and Economic Development (MFPED)

The scope of the Climate Change and Environment Review is as follows:

A. Climate Risk Screening

The initial screening for climate risks represents a first step towards "climate-proofing" development programmes. The screening will help to identify not only programmes at risk of climate change but also those that are not climate sensitive and do not, therefore, require further risk analysis. The following questions will be considered as a starting point:

- How does current climate variability affect the programme area? What are the impacts of this variability (floods, droughts)? What are the existing coping strategies used to deal with these impacts?
- What is the country's vulnerability and risks from climate change and extreme weather (e.g. island states, coastal areas, river deltas, fragile ecosystems, snow capped mountains, and dependency on agriculture, forestry, and fisheries)?
- What are the anticipated impacts of climate change in the programme area?

Based on the questions above development programs will be classified into three categories:

- **Category 1 - High risk – Full climate risk assessment required**
 - Sensitive sectors: agriculture, water resources, energy, coastal development and management and other infrastructure (e.g. roads).
 - Development programs in high risk areas, e.g. coastal, river bank, dryland areas.
- **Category 2 – Partial or moderate risk – Selective climate risk assessment required:**
 - Development programs with strong components related to water and in risk areas (e.g. integrated rural development, agriculture, fisheries, water supply and sanitation).
- **Category 3 - Low/no risk – No assessment required.**
 - Includes development programmes that are not affected in any significant way by climate, and not affecting external vulnerabilities, e.g. within health, education.
 - It should, however, be noted that these sector can be affected by indirect impacts of climate change (socio-economic change, migration, reduced food production, vector-borne diseases etc.) and can be used to enhance capacity and raise awareness on climate change.

If climate change impacts are identified as a critical sustainability element and a possible risk factor then the Review Team will suggest a set of relevant questions that the Embassy could use in the further dialogue with the partner, as well as possible adaptation measures that could be included in the existing development program or in follow-up interventions.

B. Integration of Environment – Moving from ‘do no harm’ to ‘do good’

For the Embassy the integration of environment during programming serves two objectives:

- To identify and avoid harmful direct and indirect environmental impacts of cooperation programs in the different sectors which can undermine sustainability and counteract achieving the development co-operation objectives of poverty reduction – “do no harm”.
- To recognize and realize opportunities for enhancing environmental conditions, thereby bringing additional benefits to development and economic activities and advancing environmental issues – “do good”.
- Combined this will contribute a “greening” of the Embassy’s portfolio.

The Review’s starting point is that the Review should focus on identifying environment-related activities that will contribute (directly or indirectly) to the overall development objective(s) of the project/program. The rationale behind this is to avoid a complicated objective structure and thereby hampering implementation.

C. Internal Climate Change and Environment Seminar – Learning Event

The purpose of the internal seminar is to provide an update on the Government’s Environmental Action Plan for Development Cooperation (launched in June 2006) and to provide information on relevant climate change and forest related activities.

The seminar will mainly be based on presentations and interactive discussions with Embassy staff. All staff members at the Embassy should preferably attend.

3. Approach to the Review

The suggested approach to the Review is as follows:

1. **Identification of development programs subject to review.** The Embassy identifies a representative selection of the portfolio of development programs to be reviewed covering all key sectors the Embassy is supporting. The selection should be discussed with the Review Team prior to finalization of the ToR for the Review.
2. **Country's vulnerability to climate change.** This assessment will be based on available documents prepared by the government or other donors. The Embassy should provide the Team with relevant information on climate change studies undertaken in the country. This will form the basis for the assessment of vulnerability.
3. **Desk review of available documents.** The Embassy will submit relevant program/project documents to the Review Team. The Review Team will undertake an initial desk study upon the visit to the country. Through the desk review the Team will identify key issues that subsequently should be discussed with Embassy staff and with representatives of cooperation partners in the country. The Review Team should discuss the Review with Norad's country team as well as the other 4K-topics (gender, anti-corruption and conflict sensitivity). The aim of this discussion is to solicit ideas from a wider group on relevant environment and climate change issues to be considered in the various programs and projects subject to the Review.
4. **Kick-off meeting with the Embassy.** The Team meets with the Embassy to assess the need for additional documents, meeting schedule and other practical matters. The Team should also meet with relevant Embassy staff responsible for the development programs subject to the review.
5. **Meetings with key stakeholders in the country.** The Embassy will organize meetings (about 2 hours for each meeting) with key stakeholders for each program/project subject to review. At the meeting the Team will be given information on the key activities in the development program, discuss on-going program/project activities of relevance to climate change and environment and discuss ideas and options for inclusion of new environment-related elements and to assess the climate change sensitivity and vulnerability. A meeting with the key entity responsible for climate change issues in the country should be organized.

Through these meetings additional information on the selected development programs will be collected, updated information on the status of project implementation will be received and the preliminary findings of the Desk review discussed. Through these discussions the scope for 'do good' and 'do no harm' will be discussed. The 'do no harm' discussions will be based on the country's legal framework and the obligation to ensure that assessments of environmental and social impacts are carried out in connection with the use of Norwegian development cooperation funds. The 'do good' discussions will mainly be based on the Review Team's broad environmental knowledge and competence and ideas provided by representatives of cooperation partners.

The Embassy should, preferably, participate in these discussions to create ownership, however, it is important to stress that this does not imply that the Embassy endorses ideas and suggestions made by the Review Team during these discussions.

6. **Drafting of report.** The Review Team will prepare a draft report, including a summary of key findings, upon departure. In addition to sections outlining the approach and methodology the report will present each development program subject to Review in the following manner:
 - i) brief description of goals and activities;
 - ii) climate change risk assessment;
 - iii) environment-related activities included;
 - iv) assessment of climate change impacts and scope of integration of environment; and
 - v) recommendations.

7. **Wrap-up meeting with the Embassy.** The Review Team will meet with the Embassy and present the key findings, conclusions and recommendations. This could preferably be convened in conjunction with the internal seminar.
8. **Optional point - Convene an internal climate and energy seminar for Embassy staff.** The Embassy identifies a suitable time for the seminar to fit with the Review Team's agenda. An extended lunch seminar should be considered as an option. Possible topics include presentation of the "Action Plan for environment in development cooperation" (June 2006), tools and approaches to environmental safeguarding and climate proofing, climate change policy, including the forest initiative, and other topics of interest to the Embassy that the Review Team can address.
9. **Preparation of Final Report.** The Team will forward draft report to the Embassy for approval. Norad will also undertake internal quality assurance of the report. Based on comments from the Embassy and Norad's internal quality review the final report will be prepared by the Team.
10. **Distribution of the Final Report.** The final report should be distributed to cooperation partners in the country, as well as to the Norwegian Ministry of Foreign Affairs.

4. Organization, Timetable, and Reporting

The Review is based on a one-week visit to the country by the Team.

The Review Team will be comprised of experts who have a broad background in climate change and environmental issues, experience in climate proofing and mainstreaming of the environment, familiarity with the Norwegian environmental action plan and natural resources management in general.

The team will submit a final report in English and present a draft report, including a preliminary summary of key findings, conclusions and recommendations, upon departure.

ANNEX II: PERSONS MET

Organization	Name
Royal Norwegian Embassy in Kampala	Gjermund Sæther Solveig Verheyleweghen Daniel Sandberg Nils Dårflot Rita Sandberg Mary Mabweijano
National Forestry Authority	Xavier Mugumya Tom Rukundo Fiona F. Drichiru John Diisi
Uganda Carbon Bureau	Bill Farmer
Donor community	Nathalie Johnson, WB Martin Fodor, WB Rob Rudy, DFID Grace Waako Katuramu , Danish Em- bassy Jens Fugl, Danish MFA Savio Carvalho, Oxfam
Consultant redesign MERECP	Dr Hasan Moinuddin

ANNEX III: ENVIRONMENTAL DATA – UGANDA

Uganda

Population (millions)	28.8	Land area (1,000 sq. km)	197.1	GDP (\$ billions)	8.7
	Country data	Sub-Saharan Africa group	Low-income group		
General indicators					
GNI per capita, World Bank Atlas method (\$)	280	746	585		
Urban population (% of total)	12.6	35.2	30.0		
Urban population growth (average annual %, 1990-2005)	4.1	4.0	3.1		
Population growth (average annual %, 1990-2005)	3.2	2.5	2.0		
Agriculture					
Agricultural land (% of land area)	..	44	45		
Irrigated land (% of cropland)	0.1	3.6	24.3		
Fertilizer consumption (100 grams/ha arable land)	18	139	668		
Population density, rural (people/sq. km of arable land)	453	373	589		
Forests and biodiversity					
Forest area (% of land area)	18.4	26.5	23.9		
Deforestation (average annual %, 1990-2005)	1.8	0.6	0.5		
Nationally protected area (% of land area)	32.6	11.3	10.0		
Mammal species, total known	360				
Mammal species, threatened	29				
Bird species, total known	1,015				
Bird species, threatened	15				
GEF benefits index for biodiversity (0-100, 100=maximum)	3.3				
Energy					
GDP per unit of energy use (2000 PPP \$/kg oil equivalent)	..	2.8	4.4		
Energy use per capita (kg oil equivalent)	..	703	513		
Energy from biomass products and waste (% of total)	..	55.7	47.8		
Electric power consumption per capita (kWh)	..	550	375		
Electricity generated using fossil fuel (% of total)	..	75.8	74.0		
Electricity generated by hydropower (% of total)	..	19.5	23.4		
Emissions and pollution					
CO ₂ emissions per unit of GDP (kg/2000 PPP \$ GDP)	0.0	0.4	0.4		
CO ₂ emissions per capita (metric tons)	0.1	0.8	0.8		
CO ₂ emissions growth (% , 1990-2003)	52.5	21.4	29.4		
Particulate matter (urban-pop.-weighted avg., µg/cu. m)	17	64	77		
Passenger cars (per 1,000 people)		
Water and sanitation					
Internal freshwater resources per capita (cu. m)	1,353	5,229	3,149		
Freshwater withdrawal					
Total (% of internal resources)	0.8	3.1	18.9		
Agriculture (% of total freshwater withdrawal)	40	87	89		
Access to improved water source (% total population)	60	56	75		
Rural (% of rural population)	56	43	70		
Urban (% of urban population)	87	80	88		
Access to improved sanitation (% of total population)	43	37	38		
Rural (% of rural population)	41	28	28		
Urban (% of urban population)	54	53	61		
Environment and health					
ARI prevalence (% of children under age 5)	22.0				
Diarhea prevalence (% of children under age 5)	19.6				
Under-five mortality rate (per 1,000 live births)	136	163	114		
National accounting aggregates					
Gross savings (% of GNI)	10.1	17.4	28.1		
Consumption of fixed capital (% of GNI)	8.1	10.7	9.1		
Education expenditure (% of GNI)	4.0	3.8	3.3		
Energy depletion (% of GNI)	0.0	15.5	9.8		
Mineral depletion (% of GNI)	0.0	0.8	0.7		
Net forest depletion (% of GNI)	4.6	0.3	0.6		
CO ₂ damage (% of GNI)	0.2	0.7	1.1		
Particulate emission damage (% of GNI)	0.0	0.5	0.7		
Adjusted net savings (% of GNI)	1.1	-7.3	9.5		

Source: The Little Green Data Book 2008, World Bank

Norad

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ISBN 978-82-7548-355-1

ISSN 1502-2528